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November 22, 2021

Grand Mesa, Uncompahgre and Gunnison National Forests
Ms. Samantha Staley
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RE: CPW Comments Draft Forest Plan for the Grand Mesa, Uncompahgre, and Gunnison National Forests

Dear Plan Revision Team:

Thank you for the opportunity to provide cooperating agency comments for the Grand Mesa, Uncompahgre, and Gunnison National Forest's (GMUG) Draft Forest Plan and associated Draft Environmental Impact Statement (Draft Forest Plan). CPW's mission is *to perpetuate the wildlife resources of the state, to provide a quality state parks system, and to provide enjoyable and sustainable outdoor recreation opportunities that educate and inspire current and future generations to serve as active stewards of Colorado's natural resources.* This mission is implemented through our 2015 Strategic Plan[1] and the goals it embraces which are designed to make CPW a national leader in wildlife management, conservation, and sustainable outdoor recreation for current and future generations.

CPW's involvement in the Draft Forest Plan has been extensive. We have provided written comment letters on the At-Risk Species Assessment (January 2017), Desert and Rocky Mountain Bighorn Sheep At-Risk Species Assessment (March 2017), Assessments Data Call (June 2017), Wild and Scenic Eligibility Evaluation (March 2018), Scoping Comments (June 2018), Wilderness

[1] Colorado Parks and Wildlife 2015 Strategic Plan (November 2015)
http://cpw.state.co.us/Documents/About/StrategicPlan/2015CPWStrategicPlan-11-19-15.pdf

Evaluation Report (October 2018), Preliminary Draft (May 2019), Working Draft (Aug 2019), and the Species of Conservation Concern List (June 2021). All those previous written comments are incorporated by reference into the comments that we have provided on the Draft Forest Plan.

CPW appreciates the opportunity to review the Draft Forest Plan for the GMUG, and the consistent communication with GMUG staff on the planning process. We look forward to continued collaboration as a cooperating agency. If you have any questions or would like clarification on any comment in this letter please contact Southwest Land Use Coordinator, Brian Magee at 970-375-6707.

Sincerely,

for Cory Chick

Cory Chick
Southwest Region Manager

cc: Garret Watson, Acting NW Region Manager, Brandon Diamond Area 16 Wildlife Manager, Rachael Sralla, Area 18 Wildlife Manager, Kirk Oldham, Grand Junction Area Wildlife Manager, Jamin Grigg, SW Region Senior Terrestrial Biologist, Brad Banulis, NW Region Senior Terrestrial Biologist, John Alves, SW Region Senior Aquatic Biologist, Lori Martin, NW Region Senior Aquatic Biologist, Taylor Elm, NW Region Energy Liaison

Riparian Management Zones

FW-OBJ-RMGD-06 – Please include riparian fencing or domestic grazing limitations as actions for restoration.

FW-GDL-RMGD-11 – Please add the following to the end of the RMGD 11: "In addition to the federal permitting process, proponents of water development projects (including water diversion, delivery, and storage projects) are required to mitigate impacts to wildlife and aquatic resources by developing a Fish and Wildlife Mitigation Plan (FWMP) under Colorado Revised Statute 37-60-122.2. The FWMP must be approved by the Colorado Parks and Wildlife Commission and the Colorado Water Conservation Board."

Aquatic Ecosystem

FW-STND-AQTC-03 – Please identify the GMUG Aquatic Conservation Populations as outlined by the Colorado River cutthroat trout conservation team. These stream segments are critical to the conservation of native aquatic species. The Conservation Watershed Network protections fail to protect or identify approximately 83 percent of the populations on the GMUG and 62 percent of the occupied stream miles. Please see additional comments on the Conservation Watershed Network.

FW-STND-AQTC-05 – Please add the following: "Projects conducted on crossings may offer opportunities to create fish barriers to isolate cutthroat trout populations from non-native species encroachment. USFS will coordinate with CPW staff to determine whether fish passage or barrier construction is preferable for any new projects."

FW-GDL-AQTC-08 – Please add the following: "Trapping and removal of beaver and/or removal of dams may be necessary in some situations for piscicide treatments to facilitate cutthroat trout restoration efforts."

FW-STND-RMGD-10 – Please change "alter" to "degrade". (I.e., it may be necessary to alter the hydrology to improve stream, wetlands, and fen habitats, but actions should not degrade the hydrology.)

Invasive Species

FW-OBJ-IVSP-02 - Please add to the priority treatments list: "piscicide treatments conducted by CPW to remove invasive fishes from identified watersheds to facilitate cutthroat trout restoration efforts."

FW-STND-IVSP-05 - Please modify to read: "The Forest Service shall restrict, prohibit, and/or require the inspection by a certified inspector of watercraft (motorized and non-motorized ***unless***

on the exempt list) on water bodies identified as high risk for aquatic nuisance species by Colorado Parks and Wildlife".

FW-GDL-IVSP-08 - Please add Aquatic Nuisance Species (ANS) decontamination protocol to fire suppression equipment, such as hoses, pumps, and aircraft to minimize the spread of ANS.

FW-MA-IVSP-XX- Please add a management approach to the education section to emphasize: when recreation pack goats are being used in bighorn sheep habitat, pack goats must be under control at all times by the owner and all direct contact with wild sheep must be prevented while on the trail and in campsites by discouraging bighorn sheep from approaching domestic goats to limit possible disease transmission.

FW-STND-IVSP-XX - Suggest incorporating the following new standard: Disturbed areas are monitored for invasive plant species during and after project initiation and completion, and infestations are immediately treated. Disturbed and reclaimed areas are seeded with appropriate native seed mixes to reduce possibility for invasive plant infestation.

Native Species Diversity

FW-DC-SPEC-01 – Please add: "migration, seasonal movement, and occupying winter range" to list of critical life history periods, i.e., "Disturbance of species by management activities and recreation is managed to minimize impacts during critical life history periods (breeding, feeding, migration, seasonal movement, and occupying winter range and rearing young)…"

Modify FW-DC-SPEC-02 - This currently reads, "Forage availability is maintained or increased, where capable, and contributes to ecosystem resiliency and forage for nongame species, livestock, and big game." Given that livestock are not native species, and that "nongame species… and big game" precludes small game, and potentially other taxa (i.e., insects), this desired condition should be shortened to "Forage availability is maintained or increased, where capable, and contributes to ecosystem resiliency and forage for native species."

FW-OBJ-SPEC-03 – a) Please specify characteristics or conditions for habitat that should be targeted for enhancement; b) Please expand to include "Ensure no additional loss of riparian or wetland community types, by realigning roads, trails, and routes out of wetlands and drainages and avoid use of culverts and drainage ditches that negatively impact natural hydrology/water flow."

FW-OBJ-SPEC-xx - Please add the following new objective: "During the first five years, develop a comprehensive plan and strategy for improving wildlife movement, habitat permeability, and connectivity, including spatial maps identifying: unneeded structures targeted for removal; redundant routes targeted for elimination;; specific routes that warrant mode of travel conversion; routes that should be realigned to less impactful settings; areas in need of vegetative treatments or fuels mitigation; new infrastructure to be constructed or existing infrastructure to be retrofitted

(e.g., converting existing fences to wildlife-friendly fence specifications, such as a lay-down fence) improvements to aquatic and riparian resources (e.g., remove barriers, restore dewatered stream segments, connect fragmented habitat, provide organism passage, etc.); and special measures required to address wildlife movement pinch-points.

FW-STND-SPEC-05 – Please modify to include: "To prevent bird entrapment, screens must be included on all vent pipes and *other hollow open-ended pipe or post* on pertinent new and reconstructed facilities..."

FW-STND-SPEC - Please add a new Standard: "it/retrofit all livestock water tanks/troughs with wildlife escape ramps to prevent drowning of small mammals, and Gunnison sage grouse and other birds."

FW-GDL-06 - Please add the following: "Projects conducted on crossings may offer opportunities to create fish barriers to isolate cutthroat trout populations from non-native encroachment. USFS will coordinate with CPW staff to determine whether fish passage or barrier construction is preferable for any new projects."

FW-GDL-SPEC-06 - Please include "roads and trails" as constructed features. In addition, please identify additional species to be considered during plan level implementation. (Species of native fish and native amphibians are also present on the forest and should be considered in planning. Impoundments have caused detrimental effects to mottled sculpin populations and should be considered for planning purposes. Speckled dace are also present across the forest and affected by changing aquatic conditions. While chorus frogs and tiger salamanders are common across the forest, their presence should not be disregarded for future planning and development. Woodhouse's toad is present at lower elevations as well. The amphibian diversity across the forest is ecologically important. This value does not appear to be represented in the document) .

FW-GDL-SPEC-07 - Please add the following, "Fuel reduction and habitat treatments should consider location of Pinyon Jay colonies and other nesting migratory bird species."

FW-DC-SPEC-08 – under the Management Approach, please specify the use of native plant seed mixes. Current wording: "Consider use of pollinator friendly and climate smart seed mixes in restoration and revegetation projects in order to support native pollinator species…" Recommended wording: "In restoration and revegetation projects, native plant seeds mixes are used and consideration is given to incorporation of pollinator friendly and climate smart seeds in order to support native pollinator species and increase resilience to future climate conditions."

FW-GDL-SPEC-10 - The window for consideration of hibernacula noted in the existing plan components could be shortened to run from November-March consistent with published guidance[1][2][3] considered adequate for bat hibernation in Colorado and the Rockies.

FW-STND-SPEC-xx - Please add a new plan component Standard, detailing adaptive management trigger for monitoring and addressing recreation impacts on wildlife resource within WMAs and Wilderness, to include restrictions on visitation and recreation triggered by degraded resource conditions. This plan component should be accordance with language used in the AFWA/USFS/BLM MOU on the policy and guidelines for fish and wildlife management in designated Wilderness.

FW-OBJ-ECO-xx - Please add the following new Objective: "Pertaining to the desired condition regarding biological connectivity (FW-DC-ECO-05), develop a program to gain a better understanding of the spatial biological connectivity network in the planning area, and how the GMUG managed lands influence that network. In each year, a different biological taxa shall be focused on. Project scope may involve, but not limited to, participation in inter-agency working groups, funding research or monitoring of the taxa, research or monitoring forest uses that fragment biological connectivity, and providing educational opportunities. This may include projects aimed at conserving native species connectivity, but also understanding the movements of non-native species (e.g., nonnative species spread).

FW-GDL-ECO-xx - Please add the following new Guideline: "To maintain or enhance animal migration corridors, the GMUG will participate in inter-agency efforts to create infrastructure (i.e., highway crossing structures), on and off GMUG managed lands, necessary to allow the continued existence of known movement corridors, routes, or networks that specifically pass over the GMUG lands. And to only allow forest uses and authorizations that are complementary and promote the use and functionality of infrastructure designed to facilitate wildlife movements.

Species of Conservation Concern- See additionally comments on page 17 of this letter regarding SCC.

Bats

In general, the criteria required by the USFS to add a species as one of *substantial concern* do not allow for concerns related to the bat disease white-nose syndrome (WNS) to be addressed as they

[1] Neubaum, D. J., K. W. Navo, and J. L. Siemers. 2017. Guidelines for defining biologically important bat roosts: a case study from Colorado. Journal of Fish & Wildlife Management 8:272-282.
[2] Neubaum, D. J. 2018. Unsuspected retreats: autumn transitional roosts and presumed winter hibernacula of little brown myotis in Colorado. Journal of Mammalogy 99:1294-1306.
[3] Weller, T. J., T. J. Rodhouse, D. J. Neubaum, P. C. Ormsbee, R. D. Dixon, D. L. Popp, J. A. Williams, S. D. Osborn, B. W. Rogers, L. O. Beard, A. M. McIntire, K. A. Hersey, A. Tobin, N. L. Bjornlie, J. Foote, D. A. Bachen, B. A. Maxell, M. L. Morrison, S. C. Thomas, G. V. Oliver, and K. W. Navo. 2018. A review of bat hibernacula across the western United States: Implications for white-nose syndrome surveillance and management. PLoS ONE 13:e0205647

require a population to already be in decline. Currently, proactive measures implemented prior to the arrival of the disease and prior to declines in local bat populations, provide the best path for addressing impending impacts of WNS. The disease is present in New Mexico, suggesting that it is likely to arrive on the GMUG in the immediate future. Therefore, waiting for indications of population decline, as required by the criteria identified by the Regional Forester under (FSH1909.12-12.52d.3.f.1-4), does not put emphasis on use of proactive measures (such as collection of baseline data, hibernacula inventory, etc.), or encourage funding to be allocated for those efforts. Such information will be critical for effective deployment of viable solutions, such as a vaccine that is currently in development nor does it allow for changes in the population to be documented.

To help account for WNS and its potential impacts on bats please consider adding the following plan components:

FW-GDL SPEC- To maintain population viability of bat species after the arrival of WNS, implement proactive management guidelines for monitoring of bat populations, such as collection of baseline population data (e.g. North American Bat Program) and investigation of winter roost locations, prior to the arrival of the disease so that recovery targets can be established. (FW-GDL-SPEC-10 will require a current list of caves and mines on the GMUG that delineate the seasonality of bat use for implementation of this guideline. If such a list does not exist, developing it should be a priority for the forest.)

FW-GDL-SPEC-Preserve natural airflow in and out of occupied cave entrances and passages. Actions that may adversely alter the cave microclimate include back-filling of cave entrances, modifying sinkholes, installing entrance gates or other structures that modify airflow patterns, and digging in cave passages.

FW-OBJ-SPEC-Please add an Objective to Map populations and habitat, particularly winter hibernacula (mines, caves and rock crevices), of all bat species on the GMUG to inform project planning with 5 years of plan finalization.

Mining: See the Mining chapter of the CBWG Conservation Plan for mining management recommendations. Please add the following Guidelines:

FW-GDL-SPEC-Survey all abandoned mine openings slated for closure to identify critical bat habitat and increase our knowledge of bat distribution, roosting ecology, and species status. (This is especially important in light of the potential arrival of WNS to the state.)

FW-GDL-SPEC-Implement protocols for installing bat-compatible closures (e.g., Dalton and Dalton 1995; Tuttle and Taylor 1998; Navo and Krabacher 2002; Burghardt 2003). Evaluate any

modifications to accepted bat gate designs before widespread implementation[4]. Full citations in Colorado Bat Conservation Plan[5]

Wind Energy: See the Energy chapter of the CBWG Conservation Plan for wind energy management recommendations. Please add the following Guidelines:

FW-GDL-SPEC-Conduct surveys for bats during the location phase of wind farm development to allow for avoidance of high use areas by bats and provide baseline data of that "use" so it can be referenced after construction. Timing will be particularly important during the migratory windows for bats that undertake these movements during the late spring and early fall.

Require use of curtailments beneficial in reducing bat strikes at wind farms[6]

Management Approach-

- Inventory caves for bat use, including maternity, hibernation, migration, and swarming use, and monitor those with confirmed use to better understand population dynamics.
- Minimize the use of prescribed burning in karst areas and near caves (Pierson et al. 1999). Fire can impact cave and karst features by exposure to smoke and ash, lead to degradation of cave entrances due to increased erosion, and cause leaching of carbon deposits into caves (Jones et al. 2003). Maintain high standards for atmospheric conditions that allow for good ventilation before proceeding with burns around caves (Sheffield et al. 1992; Elliott 2012). Full citations in Colorado Bat Conservation Plan[7]

FW-DC-SPEC-12 Please update this forest-wide Desired Condition to be upgraded to a **Forest-wide Guideline.** It has quantitative targets to specifically evaluate plan level project implementation action. Additionally please incorporate a 250-acre minimum security area size into the Guideline as identified in the Elk Species Assessment and identified in our comments on the Working Draft (May 22, 2019) . This should read: FW-GDL-SPEC-1- Habitat blocks of sufficient size and quality exist well-distributed across the landscape to support wildlife populations. Travel routes provide necessary access while maintaining relatively undisturbed high-quality habitat blocks—greater than 250 acres in size and a least 0.62 mile (1,000 m) from open motorized system routes and 0.41 mile (660 m) from open non-motorized system route to provide necessary security

[4] See chapters on Mining, Cave, and Rock Crevice Mgmt in the Colorado Bat Conservation Plan for additional Management Recommendations likely to influence winter hibernacula and WNS management
[5] Navo, K.W., D. N. Neubaum, and M.A. Neubaum, eds., 2018. Colorado bat conservation plan. Second Edition. Colorado Committee of the Western Bat Working Group.
[6] Hayes, M. A., L. A. Hooton, K. L. Gilland, C. Grandgent, R. L. Smith, S. R. Lindsay, J. D. Collins, S. M. Schumacher, P. A. Rabie, J. C. Gruver, and J. Goodrich-Mahoney. 2019. A smart curtailment approach for reducing bat fatalities and curtailment time at wind energy facilities. Ecological Applications:e01881
[7] Navo, K.W., D. N. Neubaum, and M.A. Neubaum, eds., 2018. Colorado bat conservation plan. Second Edition. Colorado Committee of the Western Bat Working Group.

areas for populations of big game and other species. Relatively undisturbed migration and movement corridors exist across the landscape that provide sufficient security and habitat quality to allow for relatively unabated movement of big game and other species. See also chapter 3, Wildlife Management Area section; the Forest-wide desired conditions for ecosystem connectivity ECO-06 and for range RNG-01; and the Forest-wide objective for native species diversity SPEC-03.

FW-GDL-SPEC-Add a guideline to design vegetation screening cover based characteristics for cover type from routes to reduce the potential displacement distances of wildlife from routes. Screening distances necessary to achieve the guideline will consider topography, route type, use, seasonal closures, etc..

High Priority Habitats

CPW has adopted internal policy to guide our staff and promote statewide consistency when making site-specific land use development recommendations across jurisdictions, species, and habitat types in Colorado. In early 2020, CPW's internal subject matter experts consulted with peers in other agencies and academic institutions to update these guidance documents to incorporate new information and the best available science. *CPW's Recommendations to Avoid and Minimize Impacts to Wildlife from Land Use Development in Colorado* reflect this latest update. These recommendations also guide our staff when engaged with the USDA Forest Service (USFS) on NEPA decisions, including large scale planning efforts such as Forest Plan revisions as well as individual projects such as recreation and energy development proposals.

Please add a Forest wide Guideline to consult and incorporate CPW High Priority Habitat Recommendations:

FW-GDL-SPEC-xx -To avoid, minimize, and mitigate the impacts of various types of land use development and recreational activities on wildlife resources in Colorado, consult and implement CPW High Priority Habitat Recommendations during project level implementation. Consult with CPW to ensure consistency with the most up to date best available science-based recommendation.

https://cpw.state.co.us/Documents/Conservation-Resources/Energy-Mining/CPW_HPH-Map-Layers.pdf

Bighorn Sheep

CPW has consistently and strongly advocated for bighorn sheep (BHS) to be on the Species of Conservation Concern list. We have had numerous discussions with USFS staff regarding their inclusion. We have articulated why there is a substantial concern for the species viability in the plan area. Please see our SCC letter dated June 28, 2021. We understand the GUMG plan is guided

by the Regional Forester's direction[8] in the implementation of the 2012 Planning Rule. However, we are concerned with the narrow interpretation of how species are designated on the SCC list. The Regional Forester memo does not give a clear path on how species identified by the State as a high priority for conservation under 12.52c.3c can make the list. It seems that the Regional Forester has great discretion in this realm and we respectfully ask you to reconsider the State's request.

Monitoring - We are also interested in the monitoring component of the planning rule for the SCC list. Monitoring of BHS population dynamics is important to ensure that adaptive and proactive measures are taken immediately in the event that species population viability is threatened. We do not expect the USFS to actively monitor populations, however, similar to the Rio Grande National Forest, we propose that the GMUG specify the use of annually collected CPW data to fulfill the monitoring requirement of the 2012 Planning Rule.

We appreciate the plan components in the preferred alternative to help aid in wild sheep conservation. The plan component edits and additions are designed at helping to ensure that bighorn sheep conservation is a priority on the GUMG and that population viability is maintained.

FW-DC-SPEC-xx - Please add a new Desired Condition: "Bighorn disease outbreaks occur at an interval greater than one per 50 years."

Modify FW-STND-SPEC-13 to read: On active grazing allotments, maintain effective separation between domestic sheep and bighorn sheep herds. Effective separation is the spatial or temporal separation between bighorn sheep and domestic sheep. Specifically, effective separation is defined as 1) science-based estimates of bighorn sheep core herd range and movements across the landscape in relation to domestic sheep areas, and managing potential contact rates to an acceptable level to reduce the risk of disease transmission (see: as defined in p. 203 of EIS, Vol 1). Spatial separation is defined as a contact rate of less than one bighorn sheep foray expected to reach an allotment in a three year interval (as determined by a risk of contact analysis). Temporal separation is defined as: no stray domestic sheep occurring in bighorn overall range outside the permitted grazing season. Collectively these result in minimal risk of contact and subsequent transmission of respiratory disease between animal groups." See associated management approach.

Please add a Guideline associated with **FW-STND-SPEC-13**-Reports of domestic sheep/goat interactions with wild bighorn sheep should be given to state biologists or officers and federal land managers immediately (no later than 24 hours from observation) to notify permittees to recover stray livestock. CPW will determine if removal of wild bighorn sheep suspected to have interacted with domestic sheep/goats is feasible and necessary.

[8] Draft letter from Regional Forester on the Species of Conservation Concern list for the GMUG forest plan revision to Forest Supervisor dated Feb 1, 2020

Convert FW-GDL-SPEC-15 to a standard. Modify the language to include: "To maintain long term population viability and desired herd distribution, new activities *and project authorizations* above and beyond the existing baseline condition…"

Convert FW-GDL-SPEC-16 to a standard and modify with language below: **Modify** FW-GDL-SPEC16 Management Approach section (Page 30):

While CPW's statewide direction for management emphasis is on Tier 1 and Tier 2 populations (George et al. 2009), CPW also operates under the direction that the Tier categorization will not preclude management of smaller herds of local importance. Within the GMUG, smaller herds (i.e., S26, S70) are highly connected to larger herds throughout the GMUG. Additionally, CPW has not evaluated to assign Tier status to half of the GMUG populations (RBS-13, RBS-25, RBS-27, RBS-23, RBS29 and RBS30) through the creation of DAU (RBS- prefix) level Herd Management Plans. In herds that do not have population management plans, they would follow under the 2009 CPW (DOW) Statewide Bighorn Management plan which says that "The DOW will strive to manage Colorado's bighorn sheep resource to maintain or increase the size of existing herds and populations with emphasis given to larger herd complexes that represent groups of interconnected herds with a mountain range" (George et al. 2009). Given the interconnectivity documented within the GMUG herds (dispersal and forays detected every herd with its neighboring herds, bighorn within the GMUG are considered as part of a single meta-population. Strong evidence exists for disease related die-offs occurring across multiple neighboring herds, as such happened in the late 1980's and early 1990's in the GMUG, and was well documented in herds in the neighboring San-Isabel Pike NF (George et al. 2008). Therefore, Tier 1 and Tier 2 status will mean little for ensuring viability of the bighorn meta-population in the GMUG.

Also, the wording needs to be modified with the correct guideline or standard. The current GDL cited (FW-GDL-SPEC-13) is not currently in the plan. This should cite FW-GDL-STD-13.

Overall, the final wording of this management approach (for FW-GDL-STD-13) would be improved if it read as the following list of bulleted items:

- Use the most current version of the Western Association of Fish and Wildlife Agencies Recommendations for Domestic Sheep and Goat Management in Wild Sheep Habitat to inform management.

- Methods used for conducting risk of contact analysis between bighorn sheep and domestic sheep will follow those recommended by Colorado Parks and Wildlife and/or WAFWA.

- Risk of contact analysis will incorporate quantified estimates of predicted number of individual bighorn sheep forays expected to reach an allotment in a given time frame. In lieu of quantified predictions for individual bighorn sheep forays, anecdotal observations of bighorns collected on the allotment can serve only as a minimum measure of contact between wild and domestic sheep.

FW-GDL-SPEC-Please add: Record the number of domestic sheep that are put into an allotment at the beginning of a season and record the number of domestic sheep that come off of the allotment at the end of the season. We understand mortalities may not be found on open range, but this estimate can help us determine how many domestic sheep may still be left on the landscape after gathering at the end of the season. Please provide these numbers to CPW, so we can help locate any missing sheep on the allotments during our classification flights.

FW-GDL-SPEC- Please add: The potential risk of wild sheep contact or interaction with domestic sheep or goats will be analyzed using the best available science and information, best available models, and updated regularly. Specifically, a risk analysis will be conducted when domestic sheep or goat grazing authorizations, including trailing, or other activities, are under consideration when (1) land-use plans are developed, including revisions, relevant amendments, and implementation level plans; (2) issuing or renewing domestic sheep or goat grazing permits; and (3) when risk has not previously been analyzed or when new/updated science, information, analysis tools, models, or maps could substantially affect the results of a previous risk analysis, as determined by the USFS field office.

At the outset of planning and identifying the range of alternatives in the NEPA review, the level of analysis should be commensurate with the presumed degree of risk for inter-species contact and potential disease transmission determined with coordination with partner agencies, tribes, and permittees, and lessees. Once the risk of contact between wild sheep and domestic sheep or goats has been identified for a specific area, and for the range of alternatives in NEPA, the USFS authorized officer will evaluate the identified level or extent of risk and determine if domestic sheep or goat grazing can occur and still achieve effective separation from wild sheep (FW-STND-SPEC-13). The decision will include an assessment of how management practices and geographic features are expected to provide for effective separation as documented in the applicable NEPA analyses and decision documents for proposed activities. The higher the level of risk, the more likely that management practices will need to be incorporated into decisions to achieve effective separation, including not authorizing domestic sheep or goat grazing or other uses.

Comments regarding the summary Evaluation for the four SCC criteria on Rocky Mountain Bighorn sheep (page 260 - Appendix for SCC):

Criteria 1 (Significant threats): We agree with the significant threats listed.

Criteria 2 (Declining trends in populations):

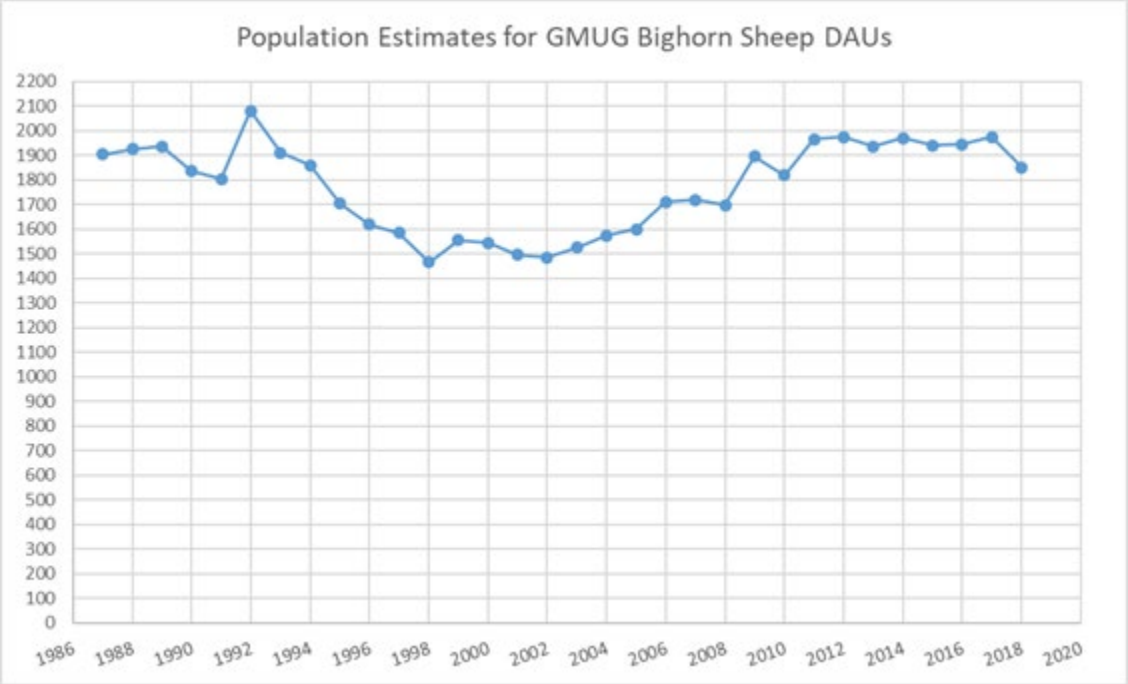
A long-term population of bighorn sheep has indeed declined in Colorado. Throughout bighorn sheep's overall species range in North America, estimates were 1.5-2 million during pre-Columbian periods (Seton 1929)[9] and then dropped to about 15,00 – 18,200 by 1960 (Buchner

[9] Seton, E.T. 1929. Lives of game animals. Doubleday, Doran and Co., GardenCity, NY, 949 pp.

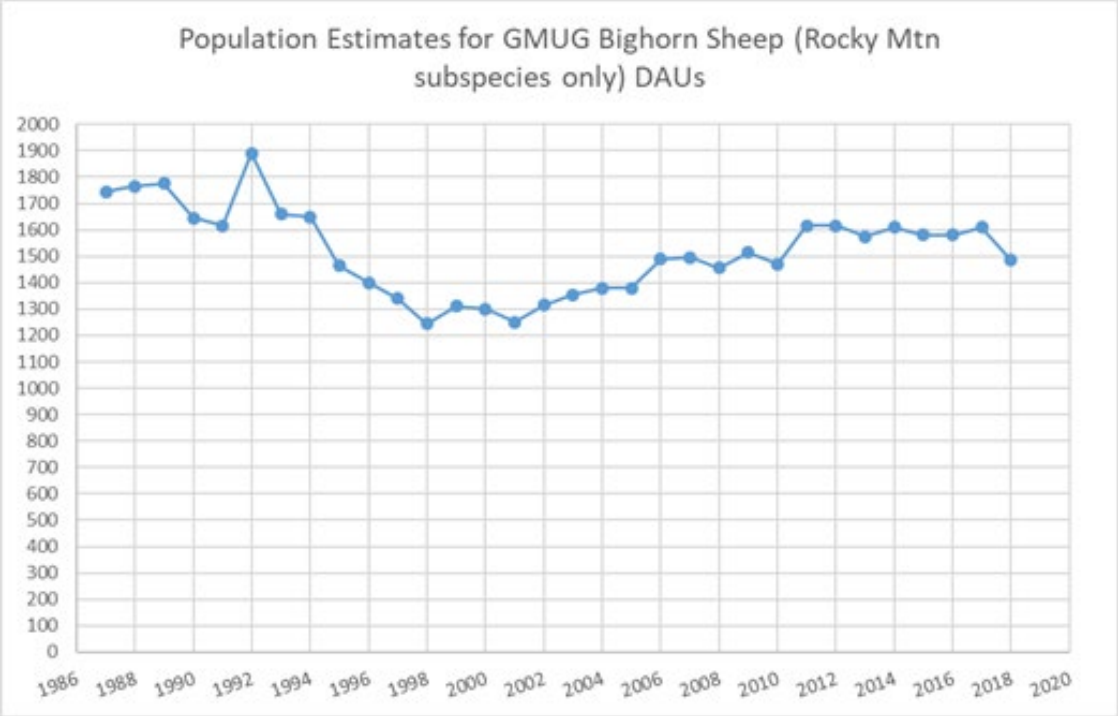
1960)[10]. Currently, bighorn rangewide estimates are at ~60,000 animals in North America, which is a far cry from the historic population size. Approximately 7200 bighorn were estimated to be in Colorado in 1922 (Seton 1929), to around 3,000 in the late 1950s (Armstrong 2011)[11], and about 2,200 in 1970, and then substantially rose to 7,045 in the late 1980's (George 2009)[12], followed by an estimated 7,000 in 2007 (CPW data). There is no reason to believe that bighorn sheep populations followed a different trend in the GMUG planning area over the course of European settlement.

CPW population size data for the GMUG populations (Data Analysis Units-DAU) and herds (Game Management Units-GMUs) is most accurate extending back to 1987. The figure below provides this trend for a longer period than what was initially evaluated in the SCC consideration process. The trend considers DAU (population range) level data for all 12 bighorn DAUs overlapping or contained completely within the GMUG planning area. These 12 bighorn DAUs are comprised of 22 bighorn GMUs. This approximately 30 year data set indicates that the more current (2018) population size estimates of bighorn (desert and rocky mountain subspecies combined) are 1,850 bighorn, which is actually 3-11% lower than the 1,905 - 2,080 bighorn estimated to exist in the GMUG populations (DAUs) during the late 1980's and early 1990s. This 1987 – 2018 dataset thus heavily contradicts the evaluation provided for criteria 2 (must have declining population size) for species of conservation concern. The statement provided in page 260 of the plan that says: "The total population of the GMUG has increased 20 percent since 2002" and we have determined that this is a subjective evaluation based on the time period selected for trend analysis.

[10] Buechner, H.K. 1960. The bighorn sheep in the United States, its past, present, and future. Wildlife Monographs 4.
[11] Armstrong, D.M., J.P. Fitzgerald, C.A. Meaney. Mammals of Colorado: 2nd edition. Denver Museum of Nature & Science and University Press of Colorado, 620 pp.
[12] George, J.L., R. Kahn, M.W. Miller, B. Watkins. 2009. Colorado Bighorn Sheep Management Plan 2009 - 2019. Colorado Parks and Wildlife.

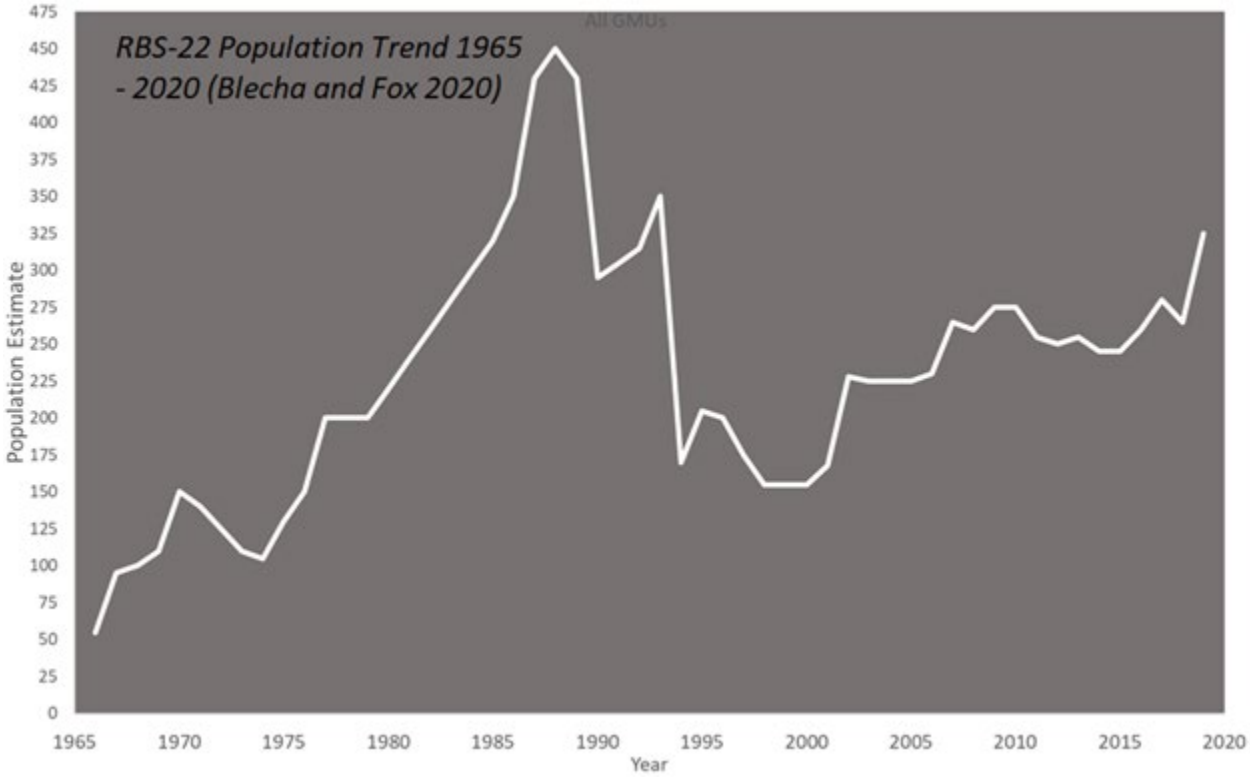


Removing the Desert bighorn sheep from consideration, as shown in the graph below, a 21% decline in the Rocky Mountain Bighorn population size using the GMUG can be observed. If one wanted to analyze the trend from 1992 – 2002, a 29% decline could be cited.



Population sizes are subject to dramatic fluctuations within any 20 year period. For example, below is a population estimate of a graph created for RBS-22 (GMUS S52, S22, S36, S53) bighorn

population (Blecha and Fox 2020[13]), which encompasses the la Garita Wilderness of the GMUG. This below graph for RBS-22 only tracks back to 1965, but demonstrates a dramatic increase and subsequent crash in the late 1980's. The population is starting to grow again, and may again do so at a dramatic rate of increase. However, dramatic increases are more likely to be followed by a dramatic decline. The source of this RBS-22 crash in the late 1980's was circumstantially related to two instances of bighorns comingling with domestic sheep in two separate bighorn herds (S-52 and S-36) within RBS-22. Dramatic population declines, many of which were linked to disease outbreaks, were also observed in S10 (RBS-11), S25 (RBS-13), S26 (RBS-23), S80 (RBS-29), and S33 (RBS-21) during the late 1980's and early 1990's.



Criteria 3 (Restricted range)

The Rocky Mountain and desert bighorn sub-species are indeed at the edge of their ranges, especially in terms of native distributions, the western 20% of the GMUG forest-planning area is desert bighorn distribution range, and the eastern 80% is Rocky Mountain bighorn subspecies range. Regardless if the desert subspecies of bighorns actually historically occurred within the GMUG planning area (Armstrong et al. 2011), desert bighorn subspecies range is well documented

[13] Blecha, K.A., K.A. Fox. 2020. Bighorn movement and domestic sheep presence surrounding a case of acute fatal pneumonia in a bighorn sheep. Northern Wild Sheep and Goat Council Conference 22. November 4, 2020.

just to the west of the planning area. Given the extreme habitat differences and shift from the montane environment the GMUG sits mostly in, and the desert habitats to the west, it is clear that rocky mountain bighorn are on the edge of their subspecies range. Besides other restricting features, Rocky mountain bighorn populations within the GMUG are thus restricted from westward expansion by habitats that are more suitable to the Desert Bighorn sub-species. This western edge of the GMUG planning area is often considered to be a transition area where the two subspecies interfaced, and hybridization among the two sub-species was historically likely occurring.

Criteria 4 (low population numbers):

Regardless of the debate about declining, stable, or increasing population trends, bighorn population densities for winter range (a limiting factor in the carrying capacity of these herds) are much lower than what they should be. For instance, S54, S33, S22, S52, S26, and S70 are currently at a population density ranging from 0.5 – 3.0 bighorns per square km of mapped suitable winter range (using the CPW bighorn winter range habitat suitability raster: Eichoff et al. 2012)[14]. Approximately 4.0 bighorn per square km of mapped suitable winter range is easily achievable given statewide data and bighorn density and carrying capacity estimates collected elsewhere. In some cases in Colorado, a higher density estimate of 4-10 bighorn per square km of mapped suitable range is being achieved. For the 12 bighorn populations (DAUs) that utilize the GMUG planning area, an overall density (bighorns per square km of mapped suitable winter range) is currently calculated to be 0.91 bighorns per square km, which corresponds to a population density of only 15% of the 4 bighorn/km^2 that is achievable.

When examining the extent of suitable summer bighorn habitat (Eichoff et al. 2012) that is currently (2019) occupied (based on CPW SAMs data), similar measures can be derived. Of the 1,637,244 acres of Rocky Mountain bighorn's summer suitable habitat available within the GMUG's boundaries, only 152,736 (or 9.3%) of these acres are occupied by bighorn. Similar results would likely be found if an occupancy analysis was run for the winter suitable habitat and winter occupied area.

Comments regarding Page 201 of EIS vol 1:

It reads: "*Regarding native ungulates, potential competition with elk is likely in the GMUG National Forests. Elk can have greater negative effects on bighorn sheep than other wild ungulates because they are much larger, have a broader dietary overlap with bighorn sheep, and can gather in large herds on traditional bighorn sheep habitat summer range in the alpine zone (George et*

[14] Eichoff, K, B. Dreher, S. Huwer, S. McClean, J. Stiver, S. Steinhoff, J. George. 2012. Bighorn sheep suitable habitat modeling in Colorado. CPW internal whitepaper. January 5, 2012.

al. 2009). On Trickle Mountain, the year-round dietary overlap between elk and bighorn sheep averaged 68 percent and increased to as much as 76 percent during the spring (Bailey and Cooperrider 1982). Elk in alpine habitats overlapping with bighorn sheep range may be of particular concern for forage competition between the two species. The degree to which bighorn sheep herds in the GMUG National Forests are affected by elk forage competition is not known."

However, GMUG bighorn herds, although close in proximity, have vastly different habitat utilization patterns than the Trickle Mountain bighorn herd (S10). The only exception to that may be S69; but even there, overlap between elk and bighorn only occurs in the winter season. Furthermore, elk congregations on alpine summer range are becoming less common due to disturbances by humans in those open non-forested habitats. Elk often utilize areas closer to forest/grassland ecotones (edges of forest and alpine grasslands). Bighorn sheep utilize areas closer to rugged (escape terrain for bighorn) than elk will. Elk populations are also held below carrying capacity, and so are bighorn at this moment. Therefore, there is no reason to believe that there is a potential for competition between bighorn and elk in the GMUG.

Comments regarding the summary Evaluation for the four SCC criteria on desert bighorn sheep (page 260 - Appendix for SCC):

Criteria 1 (Significant threats): We agree with the significant threats listed.

Criteria 2 (Declining trends or habitat): Although this population is stable, there are many factors limiting this population's ability to grow (see figure below). A recreation study is occurring in the Dominguez-Escalante National Recreation Area (DENCA-BLM) which borders the GMUG. Although we do not have any recreation studies that have occurred directly on the GMUG, other studies have been completed around the United States documenting the effects of recreation on this sensitive species. As an example, there are many types of recreation occurring on the GMUG, including hiking, mountain biking, and OHV/ATV use. These types of recreation have been shown to negatively impact bighorn sheep (Longshore et al. 2013[15], Papouchis et al. 2001[16], Wiedmann and Bleich 2014[17], Sproat et al. 2020[18]). The aforementioned studies and their findings

[15] Longshore, K., C. Lowrey, and D. B. Thompson. 2013. Detecting short-term responses to weekend recreation activity: desert bighorn sheep avoidance of hiking trails. Wildlife Society Bulletin 37:698-706.

[16] Papouchis, C. M., F. J. Singer, and W. B. Sloan. 2001. Responses of desert bighorn sheep to increased human recreation. Journal of Wildlife Management 65:573-582.

[17] Wiedmann, B.P, and V.C. Bleich. 2014. Demographic responses of bighorn sheep to recreational activities: A trial of a trail. Wildlife Society Bulletin 38: 773-782.

[18] Sproat, K.K., N.R. Martinez, T.S. Smith, W.B. Sloan, J.T. Flinders, J.W. Bates, J.G. Cresto, V.C. Bleich. 2020. Desert bighorn sheep responses to human activity in south-eastern Utah. Wildlife Research 47:16-24.

are valuable for land managers as they show how bighorn sheep respond to various types of recreation disturbance and could elucidate different management decisions that could be made based on the severity of each potential impact. For instance, bighorn sheep are less likely to avoid predictable activities like vehicles on roads or ATVs on trails, than unpredictable activities such as hiking, where people are more likely to startle sheep from a closer distance and could potentially be off-trail (Papouchis et al. 2001, Taylor and Knight 2003[19]). Guidelines or standards could then be created based on studies like these, occurring in similar habitats/activity levels to the GMUG.

Additionally, given the lack of natural wildfire cycle, forests are likely denser and occur in larger stand sizes. Higher canopy cover and larger forest stands are occurring due to fire suppression resulting in forest succession and a loss of potential habitat on the GMUG (Holl et al. 2012[20], Wakelyn 1987[21]). Drought related to climate change could also impact habitat availability and the amount of forage bighorn sheep have access to on an already unforgiving desert landscape (Epps et al. 2004[22]).

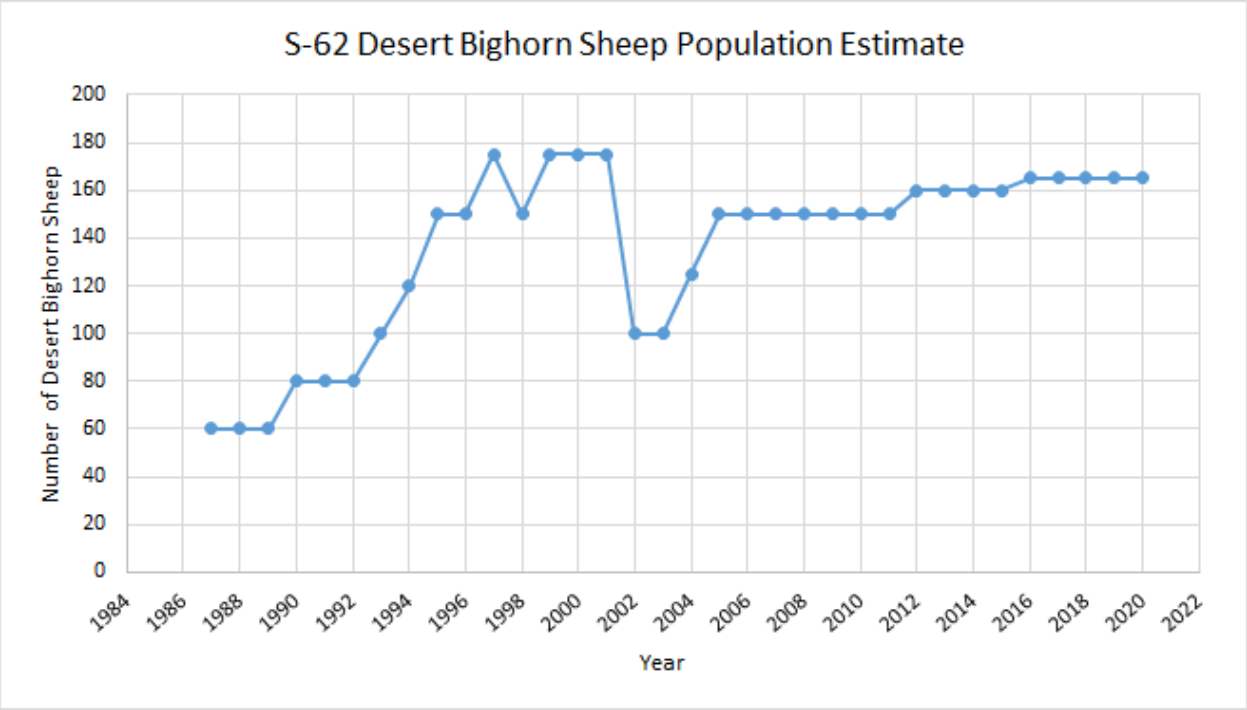
Finally, this population faces many challenges with disease outbreak and exposure as well. In addition to exposure to respiratory pathogens, hemorrhagic disease strains could also be impacting this herd's ability to increase substantially. Overall, this herd faces many challenges to growth, let alone, stability. Additional protections can only bolster this small desert bighorn herd's population.

[19] Taylor, A. R. and R. L. Knight. 2003. Wildlife responses to recreation and associated visitor perceptions. Ecological Applications 13: 951-963.

[20] Holl, S. A., V. C. Bleich, B. W. Callenberger, and B. Bahro. 2012. Simulated effects of two fire regimes on bighorn sheep: the San Gabriel Mountains, California, USA. Fire Ecology 8: 88-103.

[21] Wakelyn, L. A. 1987. Changing habitat conditions on bighorn sheep ranges in Colorado. The Journal of Wildlife Management 51: 904-912.

[22] Epps, C. W., D. R. McCullough, J. D. Wehausen, V. C. Bleich, and J. L. Rechel. 2004. Effects of climate change on population persistence of desert-dwelling mountain sheep in California. Conservation Biology 18:102-113.



Criteria 3 (restricted range): We agree that the S-62 desert bighorn sheep are at the edge of their range.

Criteria 4 (low population numbers): Often times with bighorn sheep populations, habitat was historically occupied, but due to overhunting (Buechner 1960), forest succession (Wakelyn 1987), and disease events from interactions with domestic sheep (George et al. 2009, Manlove et al. 2016, Schommer and Woolever 2008), that habitat, although viable, can no longer occupied. If not for risk of contact with domestics, bighorns could likely be transplanted into many currently unoccupied, but otherwise suitable habitats.

At Risk Species

FW-STND-SPEC-18- Please modify the Standard to read**: "**Collection of species of conservation concern shall be permitted for research, scientific, educational, conservation, or state regulated hunting purposes only."

Management Approach-Please make this an Objective within 3 years of the Final Plan. "Map populations and habitat of at-risk species to inform project planning and to successfully implement at-risk species plan components".

Species of Conservation Concern

CPW has evaluated the Species of Conservation Concern (SCC) on the GMUG several times. We understand that the Regional Forester has elected to limit the SCC criteria to the factors listed in

FSH1909.12- 12.52d.3.f.1-4 (the four factors). We provided detailed comments and input on Species of Conservation Concern tables in our June 28, 2021 letter and by using the best available information if species met the four factors. Our comments below and within the bighorn sheep section are in an attempt to articulate and clarify the questions raised by GMUG in their August 18, 2021 letter[23] to CPW. Per the GMUG request, we have chosen to focus on the four factors and the individual species meeting those factors on the GMUG, and have identified Plan Components designed to address the specific actions necessary for the conservation of the species.

Having said that, we are concerned that the Regional Forester has selected narrow criteria that neglects additional categories that could qualify a species to be designated SCC and unnecessarily requires species to meet all four factors under the Land Management Planning Handbook. CPW believes that this narrow criteria precludes obvious species for inclusion on SCC list. For a species to be considered for SCC they must be known to occur in the plan area and the best available scientific information must indicate substantial concern about the species' capability to persist over the long term in the plan area (36 CFR 219.9). CPW's subject matter experts have substantial concern for species to persist over the long term and respectively request that the Regional Forester consider the categories under FSH1909.12-12.52d.3.c and d as sufficient information to designate the species identified herein and those in our June 28, 2021 letter.

Gunnison Prairie Dog – Add Standard that USFS will work with CPW to help maintain healthy GUPD colonies on the GMUG by annually distributing sylvatic plague oral vaccine baits and monitoring colonies.

Pinyon Jays - Pinyon Jays (PIJA) have high site fidelity to their breeding colonies. As noted in our SCC letter this species is in steep decline[24]. CPW will provide known colony location maps to the GMUG by January of 2022. CPW can also provide training to biologists on how to locate and map PIJA colonies.

In order to address the conservation threats to this species please include plan components:

- That requires conducting surveys for PIJAs prior to timber management treatments, fuel reductions, or wildlife habitat improvement projects in PJ habitats.
- PIJAs are early breeders with breeding initiated in mid-February and subsiding by the end of May. Timing of treatments in PJ habitat should avoid this breeding window. PIJA colonies are often located in areas where PJ encroaches into sagebrush.

[23] Stewart, Chad. Forest Supervisor. Letter to Cory Chick Southwest Regional Manager Colorado Parks and Wildife . August 18, 2021

[24] Boone, J.D. E. Ammon, and K. Johnson. Long-term declines in the pinyon jay and management implications for piñon-juniper woodlands. in Trends and traditions: Avifaunal change in western North America (W. D. Shuford, R. E. Gill Jr., and C. M. Handel, eds.), pp. 190–197. Studies of Western Birds 3. Western Field Ornithologists, Camarillo, CA; doi 10.21199/SWB3.10.

Brown Capped Rosy Finch

Table 51. Corrections for Brown Capped Rosy Finch (BCRF).

Evidence of Occurrence: CPW recently conducted 3 years (2018-2020) of field work to assess the species status throughout the state. Final results will be forthcoming. Eleven study sites were assessed on the GMUG and breeding BCRFs were found at all eleven study sites with a high number of breeding birds at each site. BCRFs are found throughout the state in alpine habitats.

Percent of potential suitable breeding habitat on GMUG is approximately 247,000 acres. CPW along with Bird Conservancy of the Rockies and Colorado State University assessed genetic diversity of the species statewide and found the species to have high genetic connectivity between populations and populations did not appear to be experiencing reduced genetic variation from low population sizes. Breeding BCRFs are dependent on cliffs in the alpine for nesting. Cliff structure will not be changing with climate, but there is a serious concern of reduced snowpack, increases in extreme weather events, increases in recreation, as well as continued drought reducing seed sources on wintering sites which all work to make this a species of concern.

Please add an additional plan components of: Improving forb and grass understory in sagebrush habitats on BCRF winter range.

- Including monitoring of sheep grazing allotments on winter range to ensure that areas are not denuding of seed sources for this species.

Ptarmigan corrections:

Evidence of Occurrence: CPW currently monitors this species using occupancy surveys and has assessed the statewide population using mark-recapture, demographic data and genetic structure. CPW had a long-term study site on Mesa Seco in the GMUG[25].

Potential suitable habitat for ptarmigan on the GMUG is approximately 263,000 acres. Please remove or provide a source citation for where the 160,000 acres of occupied range is derived. Ptarmigan distribution is not uniform. The one intensive CPW study site on the GMUG (Mesa Seco) showed high yearly variation in abundance estimates, but appeared overall stable during the short duration sampled (4 years). This site has historically had limited recreation and hunting, but is impacted by annual domestic sheep grazing. It is a dry alpine site with no permanent water and little to no persistent snow. Mesa Seco does maintain abundant willow habitat and is located near other areas (Cannibal Plateau) that appear to have high densities of white-tailed ptarmigan based on observations during radio-telemetry efforts by CPW. In other areas in the state where ptarmigan

[25] Seglund, A.E., P.A. Street, K. Aagaard, J. Runge and M. Flenner, 2018 Southern white-tailed ptarmigan (*Lagopus leucura altipetens*) population assessment and conservation considerations in Colorado. Colorado Parks and Wildlife Final Report. 152 pp.

have been intensively studied in association with high recreation use (Ice Lake), CPW found ptarmigan vacating areas with high human disturbance and also documented dogs killing and harassing birds.

Please add the following plan components to address ptarmigan conservation threats on the GMUG:

- Winter Recreation should avoid expansive willow carrs to reduce disturbance to wintering ptarmigan that use these areas for feeding and winter roost areas.
- Monitoring of heavily used recreation sites in the alpine to reduce disturbance to ptarmigan. Dogs should be leashed in alpine habitats. Trash can attract unwanted predators so should be cleaned up from campsites in the alpine. Maintenance of hiking trails and OHV roads that become deeply incised are needed to properly disperse rain and snowmelt runoff to avoid the dewatering and drying out of meadows, wetlands, and willow carrs to preserve winter habitat for white-tailed ptarmigan
- FW-DC-SPEC-02 for indicators and measures add ptarmigan to list.
- FW-GDL-RNG- Monitor and assess alpine habitat especially in drought years on sheep grazing attoments and make adjustments to grazing intensity, time of use, AUMs, ect to avoid and minimize detrimental effects of forage quality to ptarmigan habitat.

Black Swift

The Gunnison Basin Climate Change Vulnerability Assessment determined this species to be "Presumed stable", with very high confidence, to climate change. However, CPW notes that climate-related reductions in insect biomass are believed to be contributing to overall decline for the species (94% decline; Partners In Flight). Other threats include recreation/disturbance at known breeding sites. Black Swift nesting sites are limited to the mist zones of waterfalls. This constitutes a restricted ecological condition on the GMUG. Changes in water levels due to drought or more extreme weather (e.g. flash floods) could impact breeding during specific years. Reduced recruitment could have lasting impacts to a long-lived bird that only lays a single egg per breeding cycle. Based on data from Bird Conservancy of the Rockies approximately 37% (38 confirmed nesting sites) of known breeding sites occur on the GMUG. Although population trends specific to the GMUG are not available, recent banding/recapture efforts at long-term banding sites in Colorado indicate a reduction in numbers of black swifts.

FW-OBJ-SPEC- Within 3 years of plan evaluate all nesting sites for conflict with recreation (climbing, extensive hiking use at water falls) and other potential impacts.

FW-STND-SPEC- At sites where recreation has the potential to impact nesting black swifts, include a seasonal closure from June 15 - Aug 31 (incubation through fledging). Closure would include no climbing on cliff walls as well as no hiking within 100 m of the nesting birds.

FW-GDL-SPEC-Conduct monitoring at known black swift colonies in coordination with partners, including CPW and Bird Conservancy of the Rockies, in order to assess population trends on the GMUG and in Colorado.

FW-DC-AQTC-02-Add abundant and diverse insect communities to support black swift populations.

Boreal Toad

FW-GDL-SPEC-22-Please modify this guideline to read: "To protect known occupied habitat of boreal toad, no new instream or wetland disturbance, structures, or impoundments should be authorized within 0.25 miles of known breeding sites and active reintroduction sites, unless the project would increase habitat quality"

FW-GDL-SPEC-23-Change language to recommend that ground-based equipment should be disinfected at all boreal toad sites on the GMUG. Suggested language: "To protect habitat for boreal toad in the GMUG, ground-based equipment should undergo decontamination protocols defined by Colorado Parks and Wildlife or equivalent prior to operating in occupied watersheds."

Gunnison Sage Grouse

Please replace "occupied Gunnison sage-grouse habitat" with "Gunnison sage-grouse Critical Habitat" throughout Plan and plan components. Use of Critical Habitat would include potential or unsuitable habitat, which are areas we need better management and habitat enhancement so that grouse are less restricted to their current range and may have an opportunity to "recover."

FW-DC-SPEC-36-Please add: In addition, the maintenance of large patches of habitat are preserved and anthropogenic disturbances and habitat fragmentation is reduced by decommissioning redundant roads, trails, routes to increase security areas and habitat effectiveness.

FW-OBJ-SPEC-38-Unfragmented and healthy habitats are the most important for GUSG recovery. If there are existing redundant, unauthorized, or illegal routes (roads and trails) please prioritize their removal and reclamation. The most significant gains in habitat improvement and increasing habitat effectiveness will be from eliminating these routes on the landscape particularly within 4 miles of a lek. Every lek is important for the recovery of the species regardless of current status. Please change the Objective to "within 3 years and 4 miles of any mapped lek". Unless the route is going to be preserved for administrative access please permanently remove the route.

FW-OBJ-SPEC-39-Please add to this objective an educational component to also inform forest users about common noxious weeds and how to identify and where to report in order, reduce spreading of weeds and to enhance early detection and treatment response.

FW-GDL-SPEC-43- Please elevate this GDL to a STND and add exception that: unless the surface disturbing action is directly tied to the maintenance or enhancement of habitat for GUSG. Leks are un-mitigatable and all other surface disturbing activities should not be permitted within 1 mile of a lek.

FW-STND-SPEC-xx-Please add a Standard that new route consideration shall not be authorized if the route density exceeds 1 linear mile per square mile (640 acres) in occupied habitat. To be consistent with the GUSG Recovery Plan it may be appropriate to reduce densities to less than 0.79 miles per square mile within 4 miles of surrounding leks[26]. In the application of the Standard Lek status should not be a factor in determining where the standard applies.

FW-GDL-SPEC-46 Please upgrade this to a standard. If the authorization is already determined to be necessary, Critical Habitat can not be avoided, and the infrastructure can not be buried, then it is necessary to include perch deterrents in all instances.

FW-GDL-SPEC-48 Please upgrade this to a Standard. Seasonal timing restrictions are the only way to minimize project construction, maintenance, and access during the breeding season. Also please include seasonal timing restrictions for all trail/route users and update the dates from March 1 through June 30. Peak hatching is the 1st week of June and early brood rearing habitat and young chicks need protection from additional disturbance. Definition of production area should follow CPW's SAM mapping. Additionally, area closures may be necessary to implement within important breeding/nesting habitat/production habitat areas if existing/future conflicts can not be satisfactorily resolved.

Please add a Guideline that would allow for area closures in the Plan where site specific resources issues are identified and require active management to preserve the habitat and habitat use by GUSG.

FW-GDL-SPEC-49-The GUSG Recovery Plan indicated that reducing noise disturbance to no more than 10 decibels above ambient within 0.6 miles of leks is the standard. This should be referenced as the standard and if the best available science indicates otherwise it should be documented during project level analysis.

FW-GDL-SPWC-52 recommend extending closure for permitted events to June 30 to better protect breeding period, which should include nesting and peak brood hatching timeframe.

[26] Aldridge, C.L., D.J. Saher, T.M. Childers, K.E. Stahlnecker, and Z.H. Bowen. 2012. Crucial nesting habitat for Gunnison sage-grouse: A spatially hierarchical approach. The Journal of Wildlife Management 76: 391-406 in GUSG Recovery Plan.

FW-DC-SPEC-xx-Please include a new that promotes healthy, sustainable aspen stands within and along the fringes of sagebrush-steppe. These aspen stands/areas provide mesic resources (insects/forbs) for Gunnison sage-grouse food.

FW-OBJ-SPEC-xx-Please include a new that aspen treatments need to be conducted at a landscape-scale treatment to allow adequate regeneration/release of sprouts so that big game and cattle cannot adversely affect survival of aspen sprouts – treatments are dispersed around landscape so all released sprouts cannot be browsed. Stands proposed for treatment include lower elevation deteriorating aspen stands that are within designated Critical Habitat for GUSG.

FW-OGJ-SPEC-xx- Suggest new that recommends all USFS staff be educated to identify noxious and invasive weeds to promote early detection and prevention actions. There areapp like EDDMapSWest to document, map, and treat noxious weeds.

FW-GDL-SPEC-50- The Flattop Mountain Wildlife Manage Area seasonal closure should extend from December 1-June 30th annually to protect GUSG nesting and early brood rearing as well as wintering wildlife.

Conservation Watershed Network

Appendix 7 (pg 222-225) and Conservation Watershed Network (pg 38-39)

The Criteria for Colorado River Cutthroat Trout inclusion in the Conservation Watershed Network List excludes the majority of our extant conservation populations due to the 5 mile inhabited stream length criteria (number 2 on page 224). For example, of the 46 Colorado River cutthroat trout populations designated as Conservation Populations on the GMUG[27], only 8 are over the 5 mile criteria, indicating that the Conservation Watershed Network protections would be absent from 83 percent of the populations on the GMUG and 62 percent of the occupied mileage. The 5 mile minimum outlined in the supporting literature is a widely used guide for long term persistence and indicates that populations less than 5 miles long are at highest risk. The smaller populations are MORE susceptible to impacts or loss due to stochastic events or damaging land use practices than those over 5 miles in length, making their inclusion on the Conservation Watershed list vital. These populations are of great value, and a better criteria would be to include all populations designated as Conservation Populations by the Colorado River cutthroat trout conservation team, of which the USFS is cosignatory. The subwatersheds and their 12-digit HUCs in which Conservation Populations exist on the GMUG are included below (and these should be included within Table 7 on page 38:

[27] CRCT Coordination Team. 2006. Conservation strategy for Colorado River cutthroat trout (Oncorhynchus clarkii pleuriticus) in the States of Colorado, Utah, and Wyoming. Colorado Division of Wildlife, Fort Collins. 24p.

Curecanti Creek (140200021002)	Little Henderson Creek (140200040204)
Steuben Creek (140200020402)	Lee Creek (140200040203)
Antelope Creek (140200020201)	Headwaters West Muddy Creek (140200040102)
Clear Fork East Muddy Creek (140200040202)- 5 populations	Headwaters Hubbard Creek (140200040404; 0.9 mi)- 2 populations
Terror Creek (140200040406)- 3 populations Paonia Reservoir (140200040401)	East Fork Escalante Creek (140200050302)
Snowshoe Creek (140200040302)	North Fork Escalante Creek (140200050303)
Middle Smith Fork (140200021205)	Lou Creek-Cow Creek (140200060102)
Upper Smith Fork (140200021201)	Lower Horsefly Creek (140300030203)
Headwaters Dry Creek (140200060501; 1.0 mi)- 2 populations	Middle Smith Fork (140200021205)
Deep Creek (140300030105)	Upper Smith Fork (140200021201)
Fall Creek (140300030108; 1.4 mi)- 2 populations	Miller Creek (140200040407)-2 populations
Turner Creek-Beaver Creek (140300030303)	Whitewater Creek (140200050706)
Big Creek (140100051302)	Headwaters South Beaver Creek (140200020202)- 2 populations
Headwaters Buzzard Creek (140100051102)	Headwaters Blue Creek (140200020801)
Beaver Creek (140200020401)	North Fork Henson Creek-Henson Creek (140200020603)
Cliff Creek (140200040305)	North Fork Tabeguache Creek (140300030601)
Robinson Creek (140200040303)- 2 populations	

FW-GDL-SPEC-56*:* Change language to recommend that ground-based equipment should be disinfected at all boreal toad sites on the GMUG. Suggested language: "To protect habitat for boreal toad in the GMUG, ground-based equipment should undergo decontamination protocols defined by Colorado Parks and Wildlife or equivalent prior to operating in occupied watersheds."

Watersheds and Water Resources

Please add a Management Approach- "In addition to the federal permitting process, proponents of water development projects (including water diversion, delivery, and storage projects) are required to mitigate impacts to wildlife and aquatic resources by developing a Fish and Wildlife Mitigation Plan (FWMP) under Colorado Revised Statute 37-60-122.2. The FWMP must be approved by the Colorado Parks and Wildlife Commission and the Colorado Water Conservation Board".

Rangelands, Forage, and Grazing

Please add a Desired Condition that allows the flexibility to create opportunities to meet specific management objectives with rest, restoration, and retirement of grazing allotments to maintain and enhance the ecological integrity of the planning area.

Please add a Range Objective to review list of USFS approved herbicides for noxious weed treatments every 5 years so that new, better herbicides may be used effectively to prevent further habitat degradation.

FW-OBJ-RNG-03 please add "disease in reference to domestic and bighorn sheep interactions, quality of the big game forage, other forest resource users such as hunters." as another possible factor for evaluating and responding to changing conditions or resource concerns during allotment management evaluations.

FW-OBJ-RNG-04- Please include removal of old woven-wire exclosures from past research and monitoring efforts such as range utilization or forest regeneration efforts within Gunnison sage-grouse Critical Habitat.

FW-STND RNG-06-Please add that no salting or mineral supplements shall be placed in bighorn sheep mapped habitats. In addition, that salt and/or mineral supplements not consumed by livestock shall be removed from the Forest at the end of the grazing period to reduce the draw and artificial concentration of wildlife.

FW-STND-RNG-07: Please add "habitat improvement projects" to the types that are evaluated for range readiness and ensure that forage and vegetation is well established, and is plentiful for wildlife.

FW-STND-RNG-08- Please add language that "Livestock grazing *will be monitored* and shall not exceed moderate utilization…"

FW-STND-RNG-xx Please add a standard that prohibits the conversion of cattle allotments to sheep allotments within bighorn sheep habitats.

FW-GDL-RNG-xx Please add a Forestwide Guideline: that allotment evaluations for responding to requests for increases in AUMs cannot rely on the restoration of degraded or functionally impaired mesic resources or wildlife habitat improvement projects to justify and support the increase in livestock AUMs. Projects designed to restore habitat productivity and connectivity under the auspices of improving wildlife populations (i.e., brood-rearing habitat for GUSG) and ecological function (i.e., greater water quantity and quality, soil conservation, flood control, etc.) cannot be degraded with livestock increases.

Recreation

It is well documented in the literature that high levels of recreation (all different user groups have a different magnitude/sphere of influence) occurring in specific wildlife habitat types and depending on the species will vacate and thus render the "wildlife habitat" functionally lost[28]. To address this please modify the following plan components.

FW-DC-REC-02: Please replace existing REC-02 with the following: "Recreation, in its mosaic of different forms, must be actively managed to ensure ecosystem integrity and attain a sustainable balance with other resources (e.g. recreation and wildlife/wildlife habitat; recreation and vegetation management; recreation and timber; recreation and minerals). Impacts to the biophysical environment from recreational use take priority and are quickly identified, quantified, and effectively mitigated at the appropriate scope and scale. Impacts from recreational use on the social environment need to examine both recreational visitor perspectives as well as local community perspectives. (Year round residents of communities living adjacent to the GMUG.) This holistic examination of the social environment will help limit, monitor and manage recreation, in all its forms, whereby facilitating positive experiences.

FW-OBJ-REC-Please include an Objective to support FW-GDL-REC-14 within 5 years all campgrounds within areas of human bear conflicts have bear resistant food and trash storage containers in consultation with Colorado Parks and Wildlife.

FW-OBJ-REC-04 Please modify this Objective which reads: "Within 10 years of plan approval, the resiliency of alpine ecosystems is enhanced on at least 100 acres of GMUG lands through implementing recreation management plans and/or road and trail decommissioning. See the Forest wide desired condition for Key Ecosystems Characteristics ECO-03." To read "on at least 1000 acres".

FW-STND-REC-07 (Dispersed Overnight Use): Clarify the wording for wildlife.

Under the bullet for Biophysical impacts near the end, the paragraph **should read**: "Further indicators of biophysical impacts **must** include modified wildlife behavior (avoidance, habituation, attraction, and/or displacement), modification or loss of wildlife habitat/shelter/movement/migration routes, or decrease in species population."

In addition, please include a timeline in which management actions must be taken when undesirable conditions exist as detailed in these points. Suggest response within days to report or awareness of these issues with short term action- signage, infrastructure/barriers, etc.

[28] Colorado Trails with Wildlife in Mind Taskforce. (2021) Colorado's Guide to Planning Trails with Wildlife in Mind. Prepared by Wellstone Collaborative Strategies and Rocky Mountain Innovation Lab. Project supported by Colorado Parks and Wildlife in collaboration with land managers in City, County, State, and Federal government across the State of Colorado. 58pp.

FW-STND-REC-08 (Dispersed Day Use): Please modify Biophysical impacts: "Indicators of unacceptable biophysical impacts can include large areas of denuded vegetation, eroded trails and streambanks, ruts channeling water in wetlands/fens, tracks off trails or roads through alpine areas, and /or modified wildlife behavior and habitat (as described in FW-STND-REC-07)"

FW-STND-REC-09: The plan component states that "consistent with Federal Law, drones shall be prohibited to be flown overhead any visitor to National Forest System Lands." Please identify additional actions that can be implemented by drone operators to ensure drones are not operated over hunters who are dispersed and can be highly undetectable. Evaluate if a seasonal drone closure is necessary forest wide to comply with federal law, and educate operators that harassment of wildlife, harassment of hunters, and hunting with the aid of a drone are all illegal activities.

FW-STND-REC-11-Please modify this standard that firewood gathering is not allowed in the alpine ecosystem (above timberline) and that campfires are only permitted in existing grates or firepans where firewood had been collected elsewhere.

FW-GDL-REC-15: Special events- Please include an evaluation of how the request for that special event will affect hunter user experience or distribution of game species. If real or perceived conflicts exist with the event and hunting, do not authorize the event on the opening weekends of Big Game Seasons.

Modify ROS map pertaining to FW-GDL-REC-16 – Table 8.

Based on this draft plan, the draft EIS, and the Draft Forest Assessment for recreation (fseprd573542), it appears that the pristine ROS setting was intentionally left out. This is inconsistent with Table 7 (below) of the Draft Designated Areas Assessment (fseprd573536) which indicates that a vast portion of wilderness is indeed pristine:

Table 7. Wilderness Management Prescription Distribution within Existing Wilderness Areas

Management Prescription	Acres	Percent
8A - Pristine Wilderness Setting	107,900	19%
8B – Primitive Wilderness Setting	224,500	39%
8C – Semi-Primitive Wilderness Setting	186,800	32%
8D – Provide for Limited Areas of High-Density Day Use[1]	1,100	0%
8 – Wilderness or Areas to be Managed as Wilderness designated in the 1993 Colorado Wilderness Act	59,600	10%

Information gaps cited in the recreation assessment include not having site-specific information regarding visitor use numbers. This is, or at least quantified measures of how many other users are encountered when seeking solitude, are needed to map differences between the primitive and pristine ROS settings.

Table 1 (below) of the Recreation Draft Assessment (fseprd573542), which cites the 1983 forest plan, has lumped Wilderness managed for pristine opportunities and wilderness managed for primitive opportunities together (Prescription emphasis 8A and 8b):

Table 1. 1983 Forest plan direction on ROS by management prescription area

[ROS defined: P = Primitive, SPNM = Semi-primitive non-motorized, SPM = Semi-primitive motorized, RN = Roaded Natural, R = Rural.]

Management Prescription Emphasis	Corresponding ROS Setting
2A – Semi-Primitive Motorized Recreation Opportunity	SPM
2B – Roaded Natural and Rural Recreation Opportunity	RN, R
3A – Semi-Primitive Non-Motorized Recreation Opportunity	SPNM
4B – Wildlife Habitat Management for Indicator Species	SPNM, SPM, RN, R
4D – Aspen Management	SPNM, SPM, RN
5A – Big Game Winter Range, non-forested	SPNM, SPM, RN
5B – Big Game Winter Range, forested	SPNM, SPM, RN
6B – Livestock Grazing	SPNM, SPM, RN
7A – Wood fiber production on suited timber lands	SPNM, SPM, RN, R
8A - Wilderness, managed for pristine opportunities	P
8B - Wilderness, managed for primitive opportunities	P
8C - Wilderness, managed for semi-primitive opportunities	SPNM

This lumping is verified in Table 3 (below) of the Recreation Assessment (fseprd573542), which shows the 107,800 acres of pristine and 224,500 primitive acres approximately summed in Table 7 of the Designated Areas Assessment (fseprd573536):

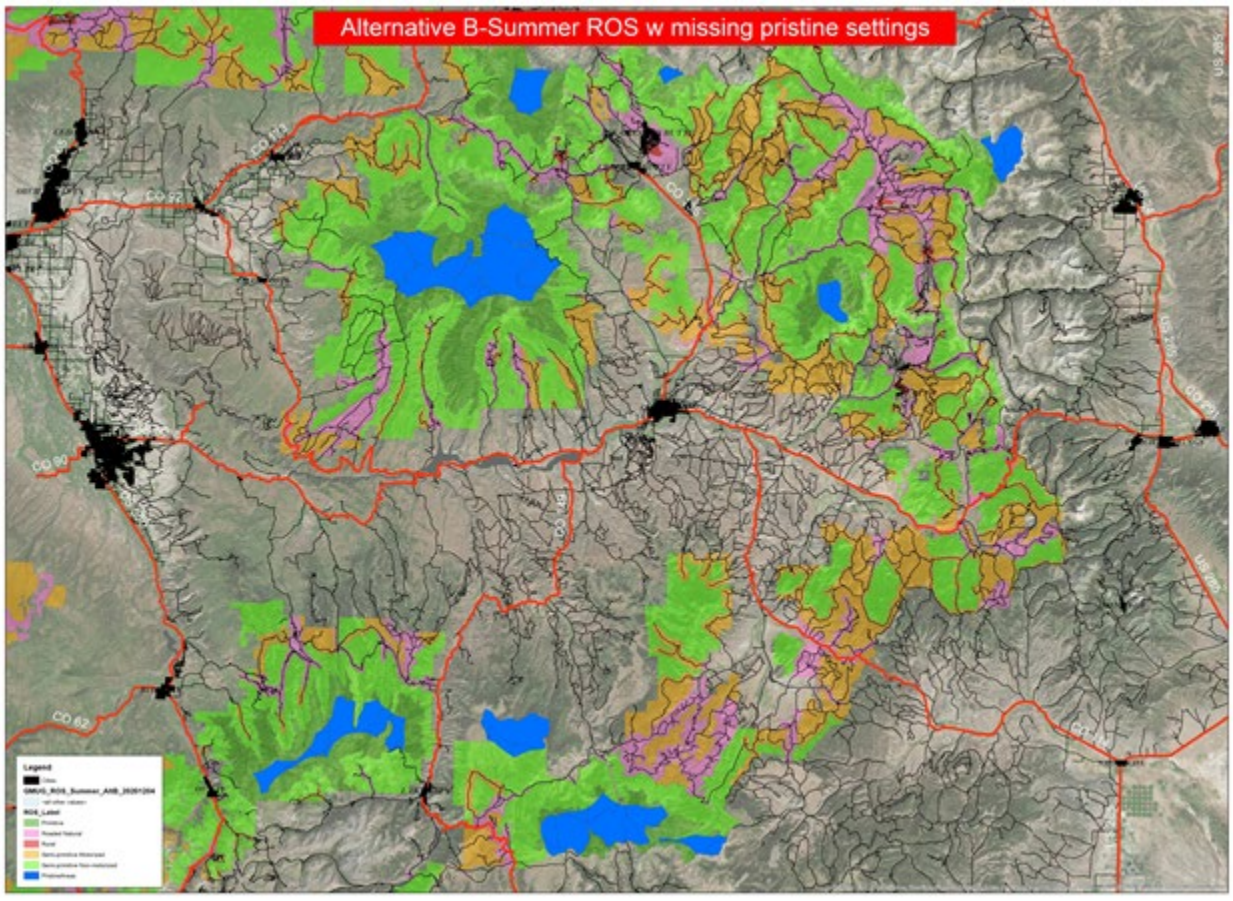
Table 3. GMUG Inventoried Existing Summer ROS settings in designated Wilderness

[ROS defined: P = Primitive, SPNM = Semi-primitive non-motorized, SPM = Semi-primitive motorized, RN = Roaded Natural; ROS class designations are only applied to Forest lands and are not applied to private lands located within the Forest boundary.]

ROS settings Class Designations in GMUG designated Wilderness areas			
P	SPNM	SPM*	RN*
331,100 acres	208,900 acres	8,600 acres	4,700 acres
76%	16%	1%	1%

Thus, there is zero amount of area designated as pristine (See table 10 – page 65 for definition) in this current draft's Summer ROS, but there is for the winter ROS. Various areas within the GMUG could easily be managed to help provide this pristine recreation opportunity, which is characterized by having minimal to no encounters with other parties due to the lack of routes or campsites. Increasing visitor use on the GMUG, the opportunities for solitude, even in designated wilderness where the solitude character has a federal mandate, are becoming more limited. This is not just important to the user experience but for some wildlife species, given that limited access into these

areas provide refuges to wildlife from human disturbances. For instance, various areas within the La Garita (3 polygons with no trails or little/no visitation), Uncompahgre (5 polygons with no trails), West Elk (8 polygons with no trails or at least little to no visitation), Fossil Ridge Wilderness (1 polygons with little to no visitation), Raggeds Wilderness (1 polygons with little to no visitation), Collegiate Pk (1 polygon with little to no visitation) have areas that fit the criteria listed in Table 10, and foremost fit the criteria of "Very minimal to no encounters with other parties due to lack of routes and campsites" that separates pristine from the primitive criteria ("six or fewer encounters with parties on trails and fewer than three parties from camping sites"). Furthermore, Table 18, the Interim wilderness management area direction from 1991 forest plan (which will be withstanding for some time), has a goal to manage for "Primitive Wilderness Opportunities", "Semi-Primitive Wilderness Opportunities", and "Pristine Wilderness Opportunities". The map below shows various pristine areas (blue polygons) where the traffic volumes (little to no other human encounters), minimum size (5000 acres), and distance from motorized routes (3 miles) can be experienced by a user with the current ROS (dark green = primitive, light green = semi primitive, orange = semi-primitive motorized, pink = roaded natural). Most of the blue polygon areas shown do not intersect any trails.



Finally, additional primitive ROS settings and primitive wilderness emphasis can easily be achieved in several other areas not shown on this map with a few modifications depending on actual trail traffic volumes on the landscape. In other cases, the 3 mile proximity criteria for a pristine setting can easily be changed by motorized route realignments. Therefore we encourage the realignment of routes in some wilderness areas to achieve this pristine setting for at least a small portion of the forest or wilderness areas in the summer season. In some cases, realignment of a motorized route in a Wildlife Management Area (i.e., Cannibal Plateau Trail 464), would increase the amount of pristine in a neighboring wilderness area.

FW-GDL-REC-16 – Management Approaches. The 9th bullet currently, this reads: "*When addressing social and/or biophysical impacts related to dispersed recreation use (FW-STND-REC-07, FW-STND-REC-08, MA-OBJ-EMREC-02, MA-OBJ-EMREC-03), the basic criteria for selecting the most appropriate management action(s) from a diverse range of options is what will efficiently and effectively respond to observable impacts.*" However, impacts from dispersed recreation use are not always readily observable. For instance, the impacts of humans on wildlife behaviors and wildlife population dynamics are not easily observable. Please add a reference to use of the best available science to aid in the identification of impacts and the resultant management actions to address the impact.

FW-GDL-REC-16 – Management Approaches. The 10th bullet currently reads "*Whenever possible, select a responsive management action that will decrease the dispersed site's overall impact rating below 6. If hardening or stabilization actions are selected that would result in a continued overall impact rating above 6, or graduate the site to above a 2 on the recreation site development scale (detailed in FSH 2309.13, 10.8), the site would then become a developed recreation site as opposed to dispersed.*" Please clarify how the criteria will balance the need for develop recreation management based on future conditions as visitation and impact proliferation increase on the ROS setting.

Other ROS comments:

The ROS appears to not always accurately depict the correct setting category. For instance, there are several stretches of primitive roads that would not allow a passenger car, and thus should be semi-primitive motorized, rather than roaded natural. These include: various spurs along Black Sage Pass Rd, BLM-3323 (Nellie Crk Rd), FS-467 (Bonholder – private access point), the junction of roads at the head of Cabin Creek and Sheep Gulch, FS-780 (Long Branch), FS-802 (Woods Gulch RD), various minor routes and spurs in the Upper Cochetopa in relation to USFS 780, 790, 855, and 794. Most of these routes are only designated as primitive (high-clearance vehicle) roads in travel management planning, or in other cases appeared to involve a road density calculation including closed or admin routes. The issue is that if these areas are designated as roaded natural, then it will become harder to get the approval to restore (reroute, realign) certain parts of these areas in the future.

Designated Trails

FW-DC-DTRL-02 - please add a bullet point in this DC that access points are carefully evaluated and located in areas that avoid, minimize, and mitigate impacts and conflicts with wildlife habitats and migration corridors.

FW-OGJ-DTRL-04 – any relocation of CDNST off existing roads must be in cooperation with CPW and efforts to preserve the historic use of Cochetopa Hills wildlife migration corridor and must reconcile conflicts with FW-DC-SPEC-01, FW-GDL-SPEC-06, FW-DC-SPEC-12, MA-STND-WLDF-02.

Modify FW-GDL-DTRL-11 which currently reads: *"To ensure continuous recreational access along the Continental Divide National Scenic Trail, alternate routes should be made available in the case of temporary closures resulting from natural events, such as fire or flood, or land management activities."* There is concern that this guides totally new routes to be established as alternative routes. Thus, we recommend the wording is adjusted to "*"To ensure continuous recreational access along the Continental Divide National Scenic Trail, alternate routes on the established road/trail network should be made known to users in the case of temporary closures resulting from natural events, such as fire or flood, or land management activities."*

Modify FW-GDL-DTRL-12, which currently reads: *"To promote natural-appearing settings, unplanned fires in the visible foreground (up to one-half mile) of the Continental Divide National Scenic Trail should be managed using minimum impact suppression tactics or other tactics appropriate for the protection of national scenic trail values. Prescribed fires in the foreground of the Continental Divide National Scenic Trail should be managed to incorporate national scenic trail values. Construction of firelines by heavy equipment should not be allowed within the visible foreground of the Continental Divide National Scenic Trail unless necessary for emergency protection of life and property."* There is concern that this guideline may preclude the use of prescribed fire in a large block of forest that is becoming overgrown. We recommend an exception is provided that reads: "Exception: Construction of firelines by heavy equipment are allowed for wildlife management purposes"

Modify FW-GDL-DTRL-19, which currently reads: *"To sustain the Old Spanish National Historic Trail's historic and scenic character, unplanned fires in the visible foreground (up to one-half mile from the trail tread) should be managed using minimum impact suppression tactics or other tactics appropriate for the protection of national historic trail values. Prescribed fires in the foreground of the Old Spanish National Historic Trail should be managed to incorporate national historic trail values. Construction of firelines by heavy equipment should not be allowed within the visible foreground of the Old Spanish National Historic Trail unless necessary for emergency protection of life and property."* There is concern that this guideline may preclude the use of prescribed fire in a large block of forest that is becoming overgrown. We recommend an exception

is provided that reads: "Exception: Construction of firelines by heavy equipment are allowed for wildlife management purposes"

Transportation System

FW-STND-TSTN-05 - Please include in the Standard that road closures are effectively maintained, signed, and enforced and are durable over time. Reinforce closed routes by proactively blocking off alternate access points in addition to the roadbed.

Please add a Guideline that directs and permits the forest district ranger close and decommission motorized/non-motorized routes on forest if it is deemed a danger to public safety and is identified as a route that cannot be adequately maintained due to its topographic/geologic attributes or other resource conditions that make the route unsustainable. Include in the evaluation its permeability and proximity to wilderness area incursion/influence.

Please add Guideline to consider alternative methods to conduct road building and maintenance so that water is harvested and put to beneficial use instead of typical cutting of ditches and installing culverts, which concentrates water and leads to increased soil erosion and alteration of natural hydrology.[29] [30]

WILDLIFE MANAGEMENT AREAS

CPW is supportive of the designation of Wildlife Management Areas (WMAs) across the forest. We provided several iterations of recommendations to the GMUG in our October 2018 comments on the Wilderness Evaluation Report, and with updated and revised polygon recommendations in 2019. These areas in 2019 were selected based, in part, on the ground knowledge of wildlife habitat, habitat use, and wildlife recreational values from CPW field staff.

CPW would like to understand the rationale for the inclusion of several particular WMAs, and the omission of others. In some instances, the Alternatives contain relatively small areas as WMAs compared to CPW's 2019 recommendation. We are concerned that, as proposed, some of these areas are disjoined from one another, fragmented, and may not achieve the intended purpose of the WMA designation to contribute to habitat effectiveness, depending upon the future land uses and forest management actions of surrounding areas. We understand the USFS' multiple use mandate requires the USFS to make compromises in balancing resources and interests across the forest. As the GMUG revises the Draft plan, and presumably settles upon some combination of WMAs, SMAs, and Recreation Emphasis Areas within the preferred alternative, CPW is available to provide input on those polygons as a Cooperating Agency. CPW is especially well-positioned to

[29]Zeedyk, W. 2006. Water Harvesting from Low-Standard Rural Roads. The Quivira Coalition, Santa Fe, NM, USA.
[30]Zeedyk, W. 1996. Managing Roads for Wet Meadow Ecosystem Recovery. US Department of Agriculture, Forest Service, Southwest Region. Tech. Rep. FHWA-FS-LP-96-016. Washington, D.C.

help the GMUG make informed decisions in this regard based our staff's local field knowledge, wildlife data, expertise in wildlife and recreation management.. We encourage the GMUG to continue robust conversations around these concepts and to continue to utilize CPW's expertise in these matters.

There are numerous land use issues/impacts (private land/exurban development and subdivision, increased highway traffic volume, etc.) that influence wildlife habitat and use. WMAs and the plan components associated with them are critical to ensuring that public lands provide necessary habitat components and ecological conditions to maintain wildlife populations, improve movements, and migrations for wildlife across the landscape. On August 21, 2019, Colorado Governor Jared Polis signed Executive Order D 2019-011 *Conserving Colorado's Big Game Winter Range and Migration Corridors* (EO). The designation of WMAs may play an outsized role in supporting wildlife population and connectivity across the landscape in support of the EO, as well as strategies identified in the Shared Stewardship agreement signed by the USFS and DNR[31].

Alternative D proposes a number of other special management area designations and Wilderness additions intended to support various conservation and related resource values – some of which overlap with WMAs. Recognizing the vision and objectives of these proposals, CPW would be supportive of extending WMA designations to these areas where such provisions would be sufficient to accomplish similar resource value outcomes, while retaining more streamlined management prescriptions and flexibility to implement future management actions to benefit wildlife habitat, fisheries and long-term ecosystem resiliency goals. -

Furthermore, the best available science supports route density standards to maintain wildlife habitat function within these important habitats for wildlife[32]. In addition, the route density standard supports the conclusions and management recommendation put forth by the USFS[33] on Sustaining Wildlife with Recreation on Public Lands (Miller et al 2020) including: minimizing recreational overlap of important habitat, implementing buffers zones, maintaining large un-fragmented landscapes, maintaining connectivity between habitat patches, reducing noise and visual disturbance, and consolidating recreational use. We appreciate the Standard within the

[31] State of Colorado and U.S. Department of Agriculture. 2020. Memorandum of Understanding between the State of Colorado and the U.S. Department of Agriculture titled Improve Shared Stewardship Across All Lands in Colorado through a Collaborative Partnership Between Colorado and USDA Forest Service (Shared Stewardship Strategy). 10 pp.

[32]Colorado Trails with Wildlife in Mind Taskforce. (2021) Colorado's Guide to Planning Trails with Wildlife in Mind. Appendix B. Prepared by Wellstone Collaborative Strategies and Rocky Mountain Innovation Lab. Project supported by Colorado Parks and Wildlife in collaboration with land managers in City, County, State, and Federal government across the State of Colorado. 58pp.

[33] Miller, A.B.; King, D.; Rowland, M.; Chapman, J.; Tomosy, M.; Liang, C.; Abelson, E.S.; Truex, R. 2020. Sustaining wildlife with recreation on public lands: a synthesis of research findings, management practices, and research needs. Gen. Tech. Rep. PNW-GTR-993. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 226 p.

WMAs. We suggest the following additions to improve the application and administration of the standard:

MA-STND-WLDF-02:To maintain habitat function and provide security habitat for wildlife species by minimizing impacts associated with roads and trails, there shall be no net gain in system routes, both motorized and non-motorized, where the system route density already exceeds 1 linear mile per square mile, within the Wildlife Management Area (WMA) boundary. Additions of new system routes within or ***adjacent to*** WMAs shall not cause the route density in a proposed project's zone of influence to exceed 1 linear mile per square mile ***within the WMA.*** Within the Flattop Wildlife Management Areas on the Gunnison Ranger District, there shall be no new routes. Exception: this does not apply to administrative routes.

We also feel that the WMAs could benefit from additional plan components that are necessary to ensure that the values for which they were selected are maintained. To support MA-DC-WLDF-01 - Please add the following plan components:

Objective for Reducing Route Densities in WMAs to Achieve Functional Habitat Goals. Please add an Objective to reflect that route densities in some WMAs currently exceed 1 linear mile per square mile, and that opportunities to reduce route densities in these areas should be evaluated over time to increase habitat function. We recommend evaluating 25% of WMAs exceeding 1 linear mile per square mile every 3 years, and prioritizing WMAs that overlap Colorado Roadless Areas and CPW-mapped high priority big game habitats.

Add a Standard for Maintaining Primitive or Semi-Primitive ROS in WMAs. Please add a Standard complimentary to WMA Standard MA-STND-WLDF-02 requiring that the Recreation Opportunity Spectrum (ROS) for WMAs be maintained as "Primitive" or "Semi-Primitive."

Guideline for vegetation management in Wildlife Management Areas. Please incorporate a guideline that ties the outcome to specific parameters that benefit wildlife, habitat connectivity, and promote biodiversity. Guidelines are needed to ensure that vegetation treatments and commercial timber harvest in WMAs are designed to improve wildlife habitat and habitat improvement is the primary objective and metrics shall include quantitative targets to meet specific habitat goals:

MA-GDL-WLDF-xx- Vegetation management, including timber management projects, fuels treatments, and wildlife treatments within WMAs should be designed specifically to retain or enhance wildlife habitat diversity and connectivity and should maintain or

enhance forage production and availability. To accomplish these goals, vegetation management projects in forested portions of WMAs should be designed so that[34] [35] [36] [37]:

- ~20 percent of the habitat is available hiding cover. Hiding cover is any vegetation capable of hiding 90 percent of a standing elk at 60 m (200ft);
- ~20 percent of the habitat is available as thermal cover. Thermal cover is a Forest stand at least 12 m (40 ft) in height with tree canopy cover of at least 70 percent;
- Wildlife security areas greater than 250 acres in size and at least 0.62 mile (1,000 m) from open motorized system routes and 0.41 mile (660 m) from open non-motorized system routes are retained. Hiding and thermal cover habitats may be equivalent and either or both may provide for wildlife security areas. Hiding and thermal cover combined should comprise ~40% of the landscape.
- 60 percent of the habitat may consist of openings of 12 to 16 ha (30 to 40 ac) with distances across openings of 365 m (1200 ft) or less; and
- Timber will be left standing along open system routes to provide wildlife security and visual obstruction of open blocks of habitats (clear cuts, meadows, alpine) occurring (or to be made via timber harvest) that are visible from routes. The screening should leave at least 80% of the original visual obstruction measured pre-timber harvest and/or utilize topographic features that reduce the visual distance.

Please incorporate a standard that focuses on creating large blocks of security cover, where security cover can be defined as those habitat variables important to the particular focus species within the WMA. For elk it will be areas that are >½ mile from a route (see Hillis definitions in the elk assessment).

Add a WMA standard that reads: Within 6 months of completion of timber management or habitat improvement operations, administrative routes created for vegetation treatment purposes, must be closed through on-ground actions to physically obstruct public access to those routes and from bypassing the closure points.

[34] Patton, D. R. 1992. Wildlife habitat relationships in Forested ecosystems. Timber Press, Portland, Oregon, USA.
[35] Patton, D. R. 1997. Wildlife habitat relationships in Forested ecosystems. Revised edition. Timber Press, Portland, Oregon, USA
[36] Severson, K.E., and A.L. Medina. 1983. Deer and elk management in the Southwest. Journal of Range Management. Monograph. No. 2., Society for Range Management, Denver, CO. 64 p. [2110]
[37] Thomas, J.W., and D.E. Toweill, eds. 2002. Elk of North America: Ecology and Management. Wildlife Management Institute. Stackpole Books, Harrisburg, PA.

Gunnison Basin and North Fork Specific Requests

We are supportive of the Flat Top WMA new route construction prohibition under Alternative B.

CPW would like to see greater consideration to the following areas for WMAs as they provide big game migration corridors and/or habitat for Gunnison sage-grouse. Gunnison sage-grouse use of higher elevation habitat on GMUG lands will likely increase as the climate continues to get hotter and drier. Please consider WMA status for:

1) Flat Top
2) Signal Peak
3) Almont Triangle
4) Dawson Gulch including adjacent Tomichi Dome and Black Sage Pass/Park
5) Cochetopa Canyon corridor
6) Carbon Creek and Red Mountain
7) Soap Creek
8) Cochetopa Hills/North Pass corridor

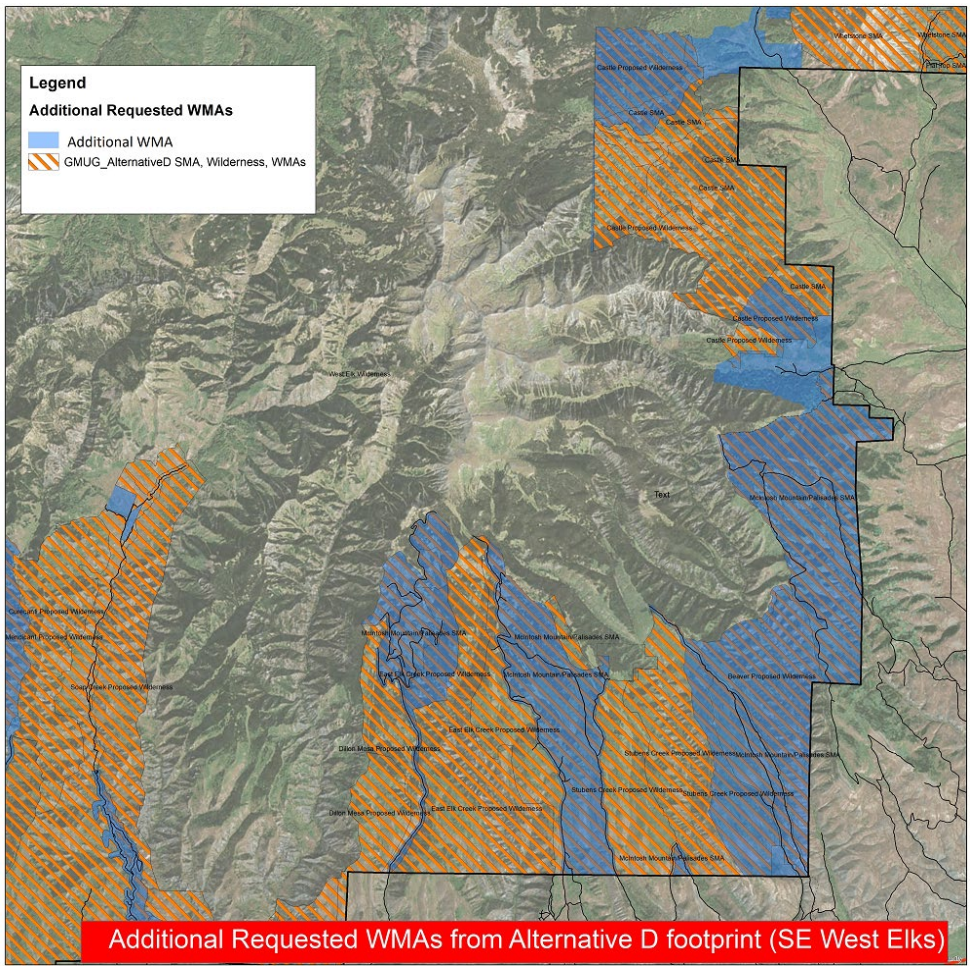
Alternative D

To meet the intention of the GPLI and Conservation Community Proposals, CPW recommends that Alternative D SMAs, proposed wilderness areas, and WMAs (not originally selected in the preferred Alt B) to be considered as additional WMAs in the preferred alternative (exceptions: Gothic/RMBL SMA and Wilderness proposed in CORE Act) with the above identified plan components:

There are specific zones from Alternative D that would be extremely valuable to wildlife not included in preferred Alt B, that CPW requests to be managed under the WMA strategy (in addition to the zones provided in Alt B). These are labeled based on best descriptive info available in the USFS provided GIS layer for Alt D:

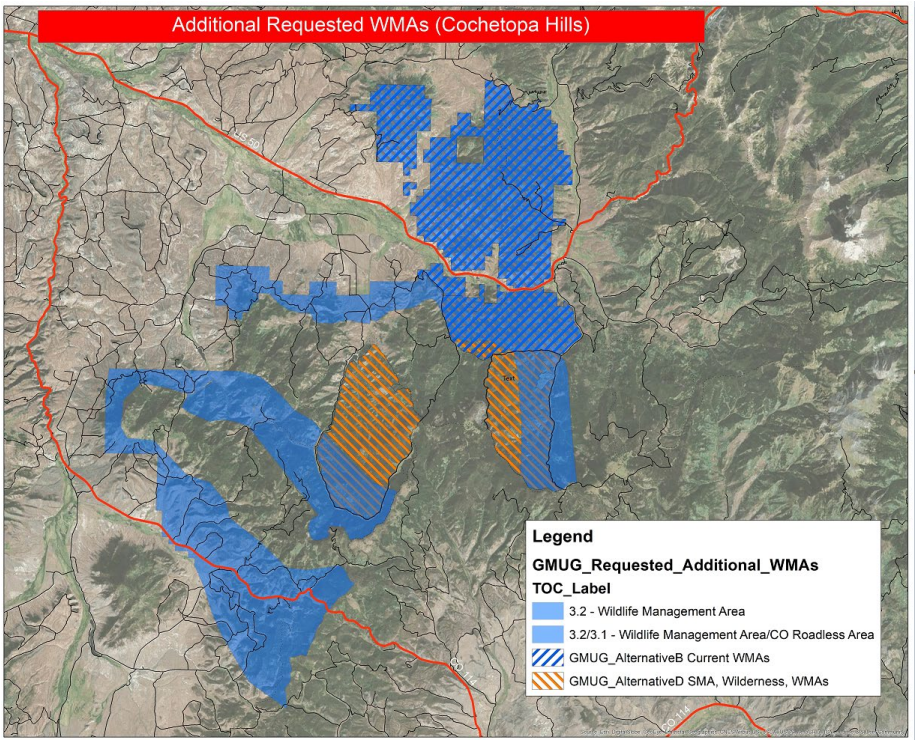
1) Matchless SMA (northern)
2) Matchless Proposed Wilderness
3) American Flag SMA (all polygons)
4) Deer Creek SMA
5) Granite Basin SMA
6) East Cement Proposed Wilderness
7) Portions of Double Top SMA south of the junction of the Double Top (405) and Waterfall Creek (#555) Trails
8) Star Peak Proposed Wilderness
9) Beckwith SMA

10) WMAs overlapping Dyer Creek SE of Crawford (1 roadless polygon, and 2 non-roadless polygons)
11) Soap Creek Proposed Wilderness
12) Southern ⅓ of the West Baldy Proposed Wilderness
13) East half of Lake Branch Proposed Wilderness
14) Cataract Proposed Wilderness
15) Crystal Creek Proposed Wilderness
16) Stubens Creek Proposed Wilderness (see inserted map of West Elks for exact area)
17) East Elk Creek Proposed Wilderness (see inserted map of West Elks for exact area)
18) Portion of Castle Proposed Wilderness (see inserted map of West Elks for exact area)
19) McIntosh Mountain/Palisades SMA (see inserted map of West Elks for exact area)

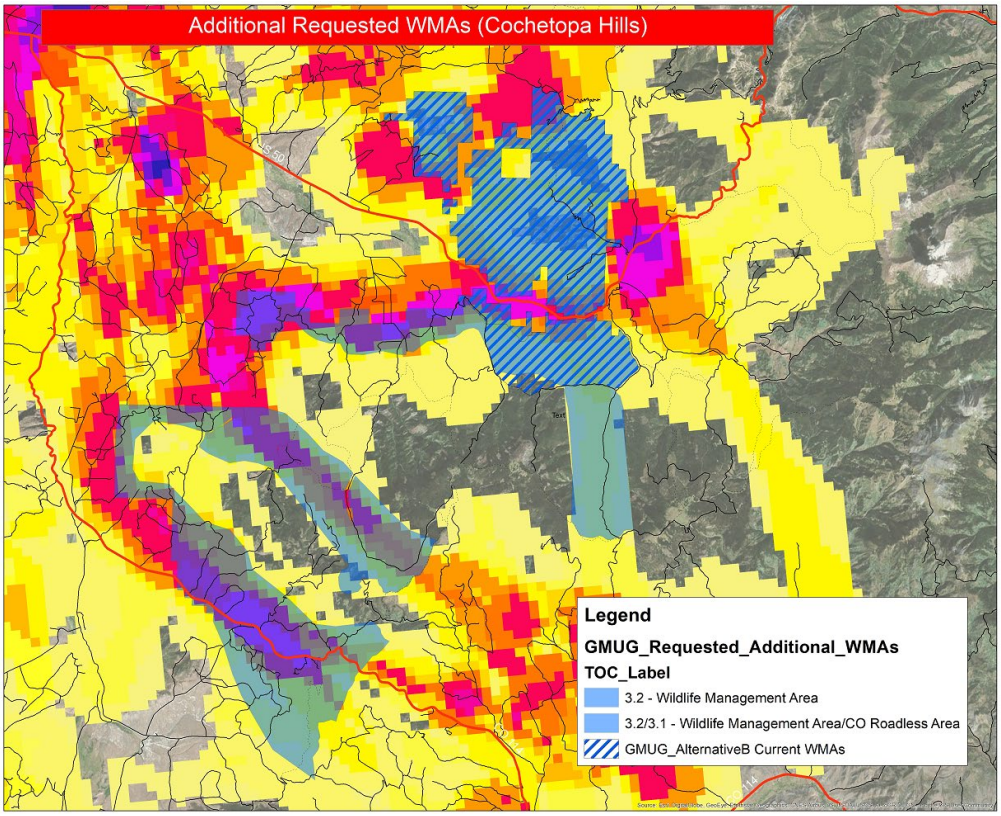


CPW has recently conducted a new analysis of ungulate migrations in the Gunnison Basin. This forest plan revision has a once in life-time opportunity to provide protections for one of the largest (75 miles long) and unique (crosses the continental divide) ungulate migration corridors currently identified in Colorado. This corridor is currently being referred to as the East Gunnison Basin Ungulate Corridor (EGBUC). Much of the zoning provided in preferred Alt B and in some parts

of D, are well poised to protect the northern half of this migration corridor. However, given the recent discovery of this migration corridor, it was impossible to include in earlier CPW comments in the working GMUG draft. The two figures below show additional WMA zones that should be added in the Cochetopa Hills area. Portions of these WMAs overlap the proposed wilderness areas in the "Lake Branch" and "West Baldy" zones in Alt D. The map below shows (unhatched blue shading) where these requested WMAs should be to help conserve this ungulate corridor.



This second map, shows a coarse heat map of the key areas within the EGBUC migration corridor system in the Cochetopa Hills area.



The EGBUC extends from Gothic to Saguache (Rio Grande National Forest). Approximately 2,000 elk are estimated to be escaping the Gunnison Basin during the winter after staging on sagebrush in the east-central portions the Gunnison Basin (i.e., Tomichi Creek). From there, an additional 30-40 miles is traversed over the Continental Divide to the Saguache Creek Drainages in the east slope. The EGBUC is not just important to elk, but to pronghorn, bighorn sheep, and mule deer. For instance, this corridor overlaps various portions of the Taylor Canyon Bighorn migration corridor that spans from Almont Triangle to Matchless Mountain. Specifically to the Cochetopa Hills, evidence exists of pronghorn using similar migration routes to traverse over the continental divide in the Cochetopa pass area. The Cochetopa pass area has historically been known as a wildlife corridor since European's documented correspondence with the Ute natives and the importance of it.

Given that this corridor system spans the eastern third of the Gunnison Sage Grouse population's critical habitat, USFS zone designations for this massive corridor, even if just on the fringe of sagebrush, will be beneficial to grouse protection via cross-jurisdictional (i.e. with BLM) planning efforts. CPW will be engaging in various outreach efforts to promote public awareness of the EGBUC in the winter of 2021-2022.

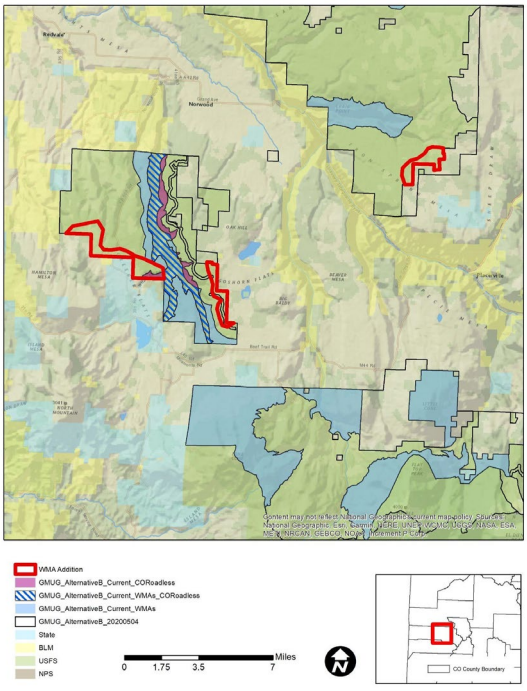
Other WMAs mentioned above, that overlap with zonings of Alt D, are particularly important to the EGBUC. These include:

20) Matchless SMA (northern)
21) Matchless Proposed Wilderness
22) American Flag SMA (all polygons)
23) Deer Creek SMA
24) Granite Basin SMA
25) East Cement Proposed Wilderness
26) Portions of Double Top SMA south of the junction of the Double Top (405) and Waterfall Creek (#555) Trails
27) Star Peak Proposed Wilderness
28) Southern ⅓ of the West Baldy Proposed Wilderness
29) East half of Lake Branch Proposed Wilderness

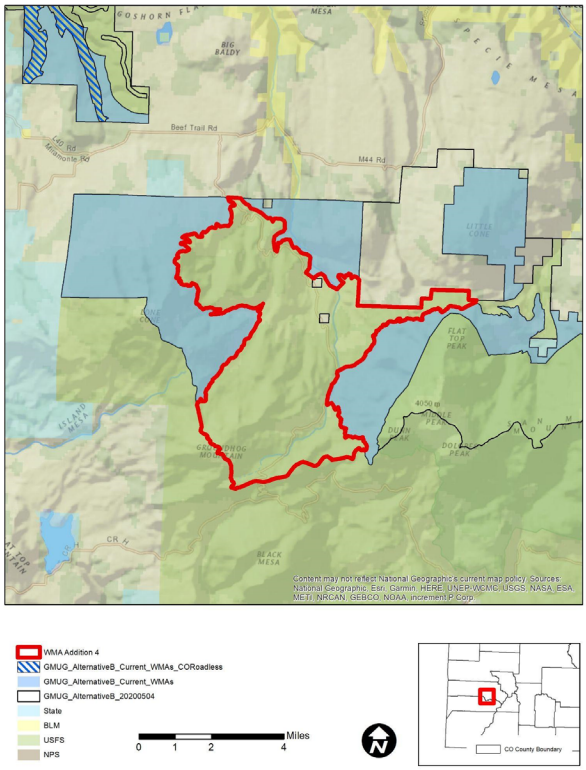
The presence of the EGBUC also highlights the importance of the existing Alt B WMAs on Flat Top, Almont Triangle, Signal Peak, Southern and Western Matchless, Round Mountain, East Cement, and Sargents/Dawson. These are critical to the protection of the EGBUC in a portion of the forest that is faced with increasing demands that can be detrimental to the conservation of elk, bighorn, mule deer, and pronghorn on and off the forest.

Norwood Ranger District

Occupied Gunnison sage-grouse habitat occurs on the GMUG in several areas in the San Miguel Basin satellite population. To protect these important habitats we recommend that these areas are included in WMAs. The figure below shows additional WMA areas in the Naturita Division and southern Uncompahgre Plateau areas that should be added to facilitate protection of Gunnison sage-grouse habitat. See below:

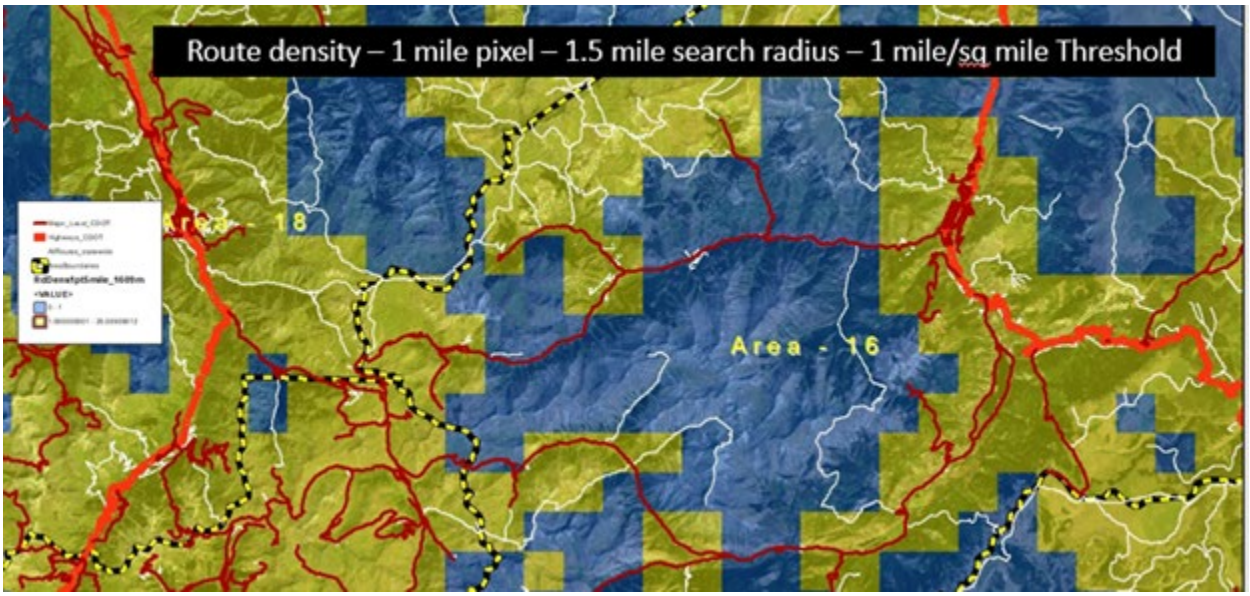


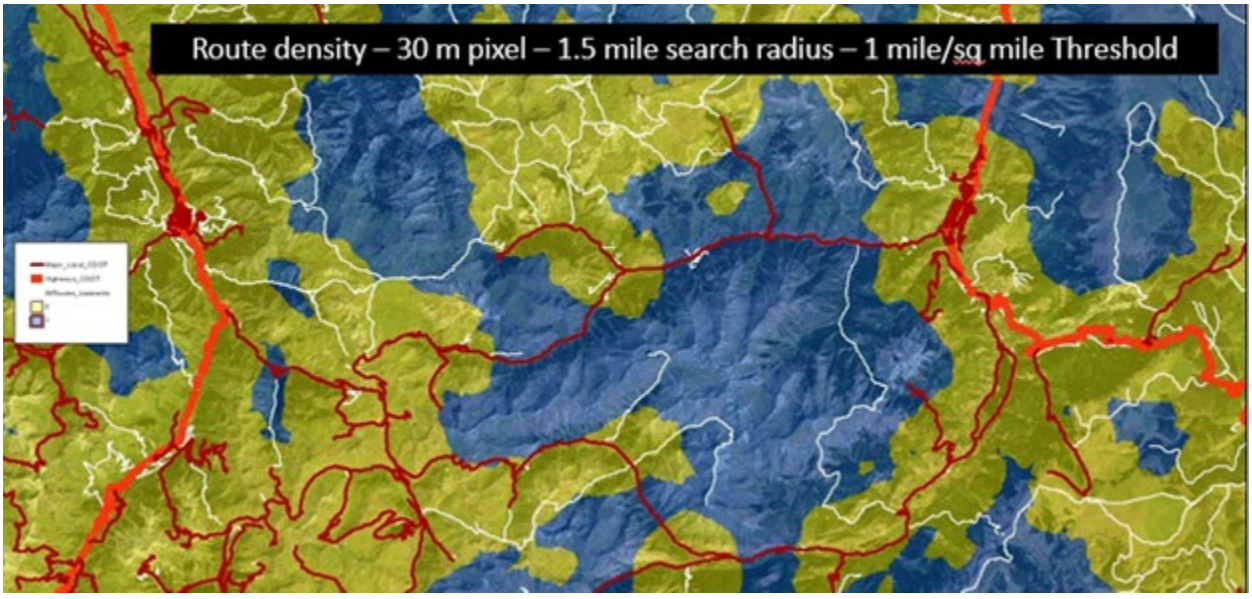
Goat Creek drainage should be incorporated into the WMA that covers the north face of the Lone Cone (So everything that is encircled by FS 612, FS 615, and FS 611). Goat Creek is an elk production area as well as a summering area. To a lesser extent, it is also used by mule deer as a production area and summer range. The Goat Creek drainage is only separated from the North Face WMA by a single double track FS road, but the area within the roads is highly valuable summer range. At present, there is only one trail within the Goat Creek drainage and it is restricted to non-motorized (foot, horse, bicycle). The entire area is potential lynx habitat. Furthermore, the designation of this area as a WMA would consolidate and build a large block habitat for wildlife.



Appendix 12 – Chapter 3 (Page 330): **Modify** the line that reads: "*System route density is calculated using the Line Density Tool in ArcGIS with a 1-mile grid cell size and a 1.5-mile search radius from the center of the grid cell"* to read: "System route density is calculated using a line density tool in an electronic cartography program (i.e., ArcGIS, qGIS, R) with a 30x30 meter grid cell size and a 1.5-mile (2414 m) search radius from the center of the focal grid cell. Output units are in miles per square mile." These modifications were determined based on new information since what CPW provided in prior drafts. These modifications ensure #1) that the tools used to calculate the route density are timeless and not restricted to the ESRI ArcGIS company, #2) a biologically reasonable grid cell (pixel) size of 30x30 meters is used rather than the 1-mile pixel size, #3) is less subjectable to the modifiable aerial unit problems, #4) coordinates of where the grid system is initiated, and thus the coordinates of the focal cells, do not influence the route density metrics for a given area. #3 is especially important in the case of

small geographies less than 1 square mile in size. Below is an example (of an area between Lake City and Ouray) comparing the use of 1 square mile pixels (top pane) and 30 m pixels (bottom pane) for the same road system, same search radius, and same output units. The yellow and blue pixel shading in this example depicts the 1 mile per square mile route threshold.





Wilderness

Modify MA-STND-WLDN-08, which currently reads: *"The Forest Service shall require that dogs be leashed and/or under direct verbal control by the dog's owner or handler at all times, except for working stock dogs, and not disturb, harm, or damage wildlife, other animals, people,*

or property. The Forest Service shall require that dogs be leashed in the Oh-Be-Joyful Valley within the Raggeds Wilderness, except for working stock dogs, or dogs used for legal hunting purposes." Direct verbal control does not preclude dogs from harassing wildlife (especially fawns and calves) in thick shrub/forest cover near the trail. Given the growing visitation and increased conflicts between dogs and wildlife conflicts, dogs should be required to be leashed in all wilderness areas. This is not just for the sake of wildlife safety, but for the sake of wilderness visitor safety (i.e., due to moose and dog conflicts, predators, etc.). Having all dogs be leashed is a requirement for many other wilderness areas in Colorado (e.g., Indian Peaks, Eagles Nest, Ptarmigan Peak, Maroon Bells, Mt Evans). Human traffic volumes of the GMUG wilderness areas, will likely reach the level of these other popular wilderness areas in Colorado within the life of this plan, if not already matching those volumes.

Convert **MA-GDL-WLDN-12** which reads: ***"****To maintain wilderness character, new trails should not be constructed in wilderness areas. If they improve wilderness character or reduce natural resource impacts, re-routes may be allowed."* **to a Standard.** Not constructing trails is already a standard for "Management Area 1.1a – Pristine Wilderness" designations.